Transmission No 4

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Computer GAMER

A View to a Kill –
Exclusive indepth review

**The Coin-op Connection –
The Arcade revival**

**Win a Tatung
Einstein**

**Indepth –
Acornsoft's
Revs**

**Indepth –
Ariolasoft's
Archon**

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PAUL McCARTNEY**

Computer GAMER

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Eecaan's Transmission

Greetings Earthlings, to a special transmission of Computer Gamer. Special, because this month we feature The Coin-op Connection.

Computer games as we know them, began life in the arcades, and since then the software houses have constantly taken their lead from their coin-op cousins. Therefore to celebrate the coin-op comeback (more people will visit the arcades this year since 1982) we look back at the history of these machines in "Coin-op chronology". We then single out the classic games in "Coin-op classics", we take a look at what's new this summer in "The Coin-op connection". Finally we feature the best of the computer versions in "Coin-op conversions".

Plus we have the first indepth review of Domark's Bond game — A View to a Kill as well as an indepth look at Acornsoft's Revs, Ariolasoft's Archon and Games Workshop's Runesstone.

We also feature three fantastic competitions in which you could win an Einstein package worth over £1000, a day with Paul McCartney, and a £100 software spending spree in the Virgin Games Centre!

All that on top of all the news, reviews and regulars that makes Computer Gamer essential reading for all serious games players. Transmission ends.

The Dentists Will Never be the Same Again!

Pioneer, the well known Japanese electronics giant has come up with an odd idea on the furniture front — a vibrating chair!

Designed for the, MSX series of computers, though it will work with anything, it uses the sound output of the computer to provide the effects. Any computer with the correct sound output and connector can feed into it, where the chair will filter the sound, increase the bass range, and divide the frequency to sub-audial levels. This 'booming' will then shake you up to provide the full effects. There are also some vibration pads for more shaking, and some stereo speakers arranged next to your ears.

There is an optional extra of a vibrating foot stool, so that you can shake a leg perhaps?

This is similar to the 'sensaround' film system in the late seventies that had a special bass track on the film and special bass speakers behind the audience, if the Pioneer system is anything like that then games will enter a whole new dimension.

What price for all this? A whopping £600 for the chair and an extra £100 for the foot stool which will certainly shake your bank balance.

"Commodore 64, that'll do nicely sir!"

Commodore's Weekend Break

News has just reached us about a series of offers from Commodore. The first will be a 'bag' offer comprising of a Commodore 64, a tape deck, a copy of International Soccer, and 2 or 3 nights in a hotel for two. The hotel can be selected from a list of 250 in Britain and the Continent. The package is expected to sell for around the £200 mark. This brings Commodore's official price of the C64 into line with the general price of a C64. Commodores recommended price for the C64 without the tape deck is still £229. Currently a C64 can be bought for as low as £150, but the going rate is around £175.

The Plus/4 also deserves a quick mention as Commodore are bundling it with a disk drive and a printer and calling it a business pack. This may be beyond the scope of this magazine but depending on the price it could make quite a good "plug in and go" system.

The last offer is going to be through mail order only and is for existing Commodore 64 owners. Called the Peripherals pack it is a disk drive, a modem, and some software. At the time of going to press no price was known for this.

The Commodore 128 is now set for a September launch, pricing is still unknown but is expected be around £250-£300.

Quake-1

In Quake-1 (Beyond's latest release under the Monolith label) you have to prevent the robot liberation front from taking over the world.

The crank terrorist organisation plans to destroy the Titan power station complex and trigger off a massive earthquake which will paralyse the industrial nations allowing the RLF to seize power.

The Titan complex is a huge power station situated deep in the Atlantic ocean where it draws power direct from the Earth's core. It is controlled by five computers called Hermes, Zeus, Poseidon, Vulcan and Ares.

When the game begins you control only Hermes and have ten hours to seize the others from the RLF. At your disposal you have 25 armed mobiles with which you do battle.

The screenshot shows the display from just one mobile. The top half of the screen shows the view of the Titan landscape which shows a selection of the buildings that form the complex. These include Energisers and fueltanks to refuel your mobile, factories to repair them along with bunkers, magnetrons, quake suppressors, cooling dromes, rigs and control towers. Capturing a control tower will give you control over a road section and all it controls. However, as you can see from the map in the bottom lefthand corner of the screen there are an awful lot of roads sections to capture.

The rest of the screen shows the fuel and energy levels of the mobile, the amount of damage it has sustained and the weapons available to that mobile.

Each mobile has one or more weapons systems which include mines, torpedos, missile pods, ironic blasters, lasers and shock shields.

The next transmission of Computer Gamer will contain an exclusive indepth review of this giant, realtime action game.

Quake-1 was written by Mike Singleton who is also working on the third part of his Lords of Midnight trilogy titled Eye of the Moon.

Eye of the Moon

This mammoth climax of the trilogy contains 16,000 locations and some 131,000 views.

It will be set in the land of Bloodmarch which lies to the south of Midnight.

In the game you must help Morkin or Tarathiel find the Eye of the Moon which is a magical jewel which can look into the future and so help him save the Land.

Mike Singleton has taken the opportunity to extend the features of the game from the original Lords of Midnight. For example, Eye features a new system called Randscaping by which every tree and mountain is unique creating a unique view for each location.

The game also contains 256 characters, each with a different face which were created from the identikit pictured in the screenshot.

Some of these characters have magical abilities ranging from weather control to terrain changing. Indeed, one of the objects that you require is surrounded by mountains and the only way that you can get at is is by enlisting the aid of the character that can flatten mountains.

Beyond hope to have the memory to include a facility, by which two players can play the game simultaneously on two Spectrums. One player would take the role of Morkin, the other Tarathiel, and would both play in the same game with the Spectrums communicating via a cassette lead.

The Eye of the Moon will be available from Beyond in September.

Elindor

July will see the release of a Lords of a Midnight spinoff called Elindor. It is a landscaped adventure which features a 750 word vocabulary and animated graphics. The screen display will be split into 3 parts. The middle section shows an animated view of the location you are in. For example if you are indoors and open a window you will be able to see the landscape through it. Should a storm blow up, then the sky will darken and lightening will flash.

The top of the screen is for text input which accepts phrases such as "meet you at noon" and the reply and details of the location will appear in the bottom third of the screen.

The passage of time is shown by the sun or moon travelling across the sky as well as by a skull that rises from a fire. When the skull is at its highest then the armies of the dead walk the land.

Unlike Midnight, where you are forced to sleep at night, you can continue your quest in darkness. However you will quickly tire and once you sleep you can't control when you wake. If you wake at all!

Swords and Sorcery

Two and a half years in the making and a year late, PSS are a last about to launch, Swords and Sorcery. This much awaited game has cost £50,000 to develop and is a real time, roleplaying, arcade adventure.

The game consists of a 4 level dungeon each contining 100 rooms packed with monsters, tricks, devious traps and treasures.

Players will enter the dungeon as a novice with only limited magical and fighting abilities but as you progress through the game your powers will increase.

The screen display will show a 3D view of rooms and their contents along with a map of part of the current level, a message scroll and a series of nested duckshoot menus from which you can enter commands quickly with a joystick.

For example, if you select MAGIC from the master duckshoot menu this leads you to a submenu from which you can choose from your list of spells. You can even store two phrases such as "Surrender or Die!" with which to greet the games characters that you will encounter.

The object of the game is to collect and assemble the pieces of the lost armour of Zob, which is scattered throughout the four levels.

Swords and Sorcery has been created using a programming system known as midas which means that a series of expansion modules will soon be available into which you can transfer your original character.

Swords and Sorcery will be available from PSS in Commodore 64 and Spectrum versions for £9.95.

Infocom Conversions

Infocom adventures which were featured in last month's Gamer are now available to Einstein and TI 99/4A users.

These classic text adventures including the Zork series and Hitchhikers are available on disk for around £40. TI users will therefore need a disc and controller, 32K RAM and extended Basic.

For further details TI users should contact Arcade Hardware on 061 225 2248 and Einstein owners will get details from Einsoft. Einsoft will also soon announce the availability of the classic game Elite which they are currently converting for the Einstein and MSX computers.

Ariolasoft's Next Releases

Ariolasoft are set to release four more US top ten hits.

Licensed from American software houses Electronic Arts and Broderbund the games will be Sky Fox, Karateka, The Castles of Dr Creep and Racing Destruction Set.

Sky Fox

Sky Fox is a flight-battle simulation in which you protect your home base from 15 different invasion forces. You pilot a jet equipped with an automatic pilot that gets you straight to the action. There your onboard battle computer takes over as you locate and destroy the enemy.

You first take on the enemy aircraft before driving through the cloud layer to do battle with their tanks and motherships.

Karateka

In Karateka the player controls a fully animated karate expert who must rescue a princess from the dungeon below the palace of the evil warlord Akuma. To succeed in your mission you must punch, kick and jab your way through the warriors that Akuma sends against you. The battles are punctuated by scenes showing the princess in her cell and Akuma despatching your next opponent.

Castles of Dr Creep

The Castles of Dr Creep is a mammoth platform game consisting of thirteen castles each containing over 200 rooms.

Each room is filled with dangers and problems that one or two players, working together, must involve. The problems include force fields, death rays, electrostatic generators and wandering mummies.

Racing Destruction Set.

Finally, Racing Destruction Set is destined to become one of my favourite games. It's a two player racing game, but with a difference.

Each player builds his own custom made car by choosing from a selection of engines, tyres and bodies which ranges from a dirt bike to a formula car racer to a moon buggy. They then arm them with oil and mines for weapons before racing on either one of the set tracks or on a custom built one. This can include chicanes, jumps and hairpins on a dirt or icy surface.

The race is contested on a Pitstop II style split screen display with the winner being the first to finish or last to survive.

All of these games will be released as soon as they have been converted onto Commodore 64 cassettes.

Ocean's Hypersports

Hypersport's is the first of a series of Konami arcade games to be converted by Ocean for the Spectrum, C64 and Amstrad computers for release under the Imagine label.

This multi sports simulation is reviewed inside and will be followed in the coming month's by "Konami's Tennis", "Yie Ar Kung-fu", "Hyper Rally", and "Konami's Golf".

Two further arcade games, "Mike" and "Comic Bakery" are scheduled for release in November and December.

Battle of Britain

PSS are soon to release a game based on the battle of Britain.

In this, the third of their Warmaster series, players defend the south of England from the attacking Luftwaffe.

At their disposal they have a maximum of 18 RAF squadrons as well as 13 radar stations and a number of land observation points to track the incoming enemy. Then its "scramble!" and the battle begins.

The player can't tell the number or type of incoming aircraft until they are engaged which then leads the game into one of its action games. Here you see the view from a Spitfire and must shoot down opposing aircraft. You only get 30 seconds to make your first "kill" and if you're successful you get bonus time for further attacks. Your skill in this stage will affect the outcome of the battles, as in Theatre Europe.

The other action screens find you manning anti-aircraft guns as you attempt to shoot down the German planes as they attack either one of the nine airbases or the sixteen towns and cities that are shown on the map.

The game covers only one day of the battle but since the program contains the required data you can either continue the campaign or choose a specific day for an easy or more difficult game.

Battle of Britain will be available for the Commodore 64, Spectrum, Atari and Amstrad computers and will cost £9.95.

McCARTNEY COMPETITION

Would you like to meet Paul McCartney? Then all you have to do to visit him in his London studios is enter our fantastic competition.

How to Enter

All you have to do to enter this fantastic competition, is prove that you could teach Paul, to play the Broadstreet game.

To do this, simply answer the six questions below which test your knowledge of the game. Then write your answers on a sheet of paper and include it with the coupon below and send it to:

Computer Gamer. (McCartney Competition) No.1 Golden Square, London W1R 3AB.

All entries must reach us by the 9th of August.

If you haven't already got a copy of the game then you can get a £1 discount by simply using the special offer coupon.

The Questions

1) How many people are there in the game?
2) What make of car does Paul drive in the game?
3) Where do you go once you've collected the missing notes?
4) What tube station does George Martin come out after landing at Heathrow?
5) In the game, which tube station shows you the Tower of London?
6) Which tube station do you go to, to visit the Old Justice Pub?

Computer Gamer and Argus Press software are teaming up to offer you the prize of a lifetime — a a chance to meet Paul McCartney.

The winner will enjoy an all expenses trip to London when they will visit Paul in his London studios and teach him how to play the game that features him — Give My Regards to Broad Street.

There will also be runners-up prizes of six copies of the Broadstreet album, six copies of the video and 50 prizes of £10 worth of software from Argus Press Software's current range.

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£1 off "Give My Regards to Broadstreet".
To take advantage of this offer simply fill in this coupon and send it to: Broadstreet offer, APS, Liberty House, 222 Regent Street, London W1R 7OB
Tick as required.
Spectrum version (RRP £7.99) £6.99 ☐
Commodore 64 version (RRP £7.99) £6.99 ☐

I enclose a cheque/postal order for £ . . . .

Name . . . .

Address . . . .

Computer Gamer (McCartney) Competition,
1 Golden Square, London W1R 3AB

Your high score is . . . .

What time of day did you finish . . . .

The last station Sandra went through was . . . .

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Name . . . .

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GALLUP CHART

Top 30

1	Soft Aid	Various
2	World Series Baseball	Imagine
3	Knight Lore	Ultimate
4	Spy Hunter	US Gold
5	Starion	Melbourne House
6	International Basketball	Commodore
7	Dambusters	US Gold
8	Combat Lynx	Durell
9	Bruce Lee	US Gold
10	Pitstop 2	CBS
11	Death Star Interceptor	System 3
12	Everyone's A Wally	Mikrogen
13	Daley Thompson's Decathlon	Ocean
14	Football Manager	Addictive Games
15	BMX Racers	Mastertronic
16	Shadowfire	Beyond Software
17	Gremlins	Adventure International
18	Moon Cresta	Incentive
19	Emerald Isle	Level 9
20	Finders Keepers	Mastertronic
21	Ghostbusters	Activision
22	Mini Office	Database Publications
23	Cauldron	Palace
24	Air Wolf	Elite
25	Manic Miner	Software Project
26	Jet Set Willy	Software Project
27	Raid Over Moscow	US Gold
28	Entombed	Ultimate
29	Alien 8	Ultimate
30	Rocky Horror Show	CRL

Spectrum Top 10

1	Soft Aid	Various
2	Starion	Melbourne House
3	Spy Hunter	US Gold
4	World Series Baseball	Imagine
5	Finders Keepers	Mastertronic
6	Death Star Interceptor	System 3
7	Bruce Lee	US Gold
8	Rocky Horror Show	CRL
9	Everyone's A Wally	Mikrogen
10	Shadowfire	Beyond

BBC Top 10

1	Knight Lore	Ultimate
2	Castle Quest	Micro Power
3	Emerald Isle	Level 9
4	Elite	Acornsoft
5	Alien 8	Ultimate
6	Combat Lynx	Durell
7	Football Manager	Addictive Games
8	Atic Atac	Ultimate
9	Revs	Acornsoft
10	Mini Office	Aardvark

Amstrad Top 10

1	Knight Lore	Ultimate
2	Ghostbusters	Activision
3	Daley Thompson's Decathlon	Ocean
4	Starstrike 3D	Realtime Software
5	Death Star Interceptior	System 3
6	Fighter Pilot	Digital Intergration
7	Sorcery	Virgin
8	Combat Lynx	Durell
9	Mini Office	Database Publicatio
10	Jet Set Willy	Software Projects

Commodore 64 Top 10

1	Soft Aid	Various
2	International Basketball	Commodore
3	Dam Busters	US Gold
4	Pitstop 2	CBS
5	Cauldron	Palace Software
6	World Series	Imagine
7	Entombed	Ultimate
8	Impossible Mission	CBS
9	Theatre Europe	PSS
10	Air Wolf	Realtime

Atari Top 10

1	Bruce Lee	US Gold
2	Pole Position	Atari
3	Kissin Cousins	English Software
4	Beach Head	US Gold
5	Mr Do	
6	Emerald Isle	Level 9
7	Cavern Commander	
8	Soccer	Atari
9	Pitfall 2	Activision
10	Lords Of Time	Micro User

JAMES BOND 007

A VIEW TO A KILL

Bond has at last burst onto the computer screen. Tony Hetherington takes an indepth look at A View to A Kill.

"My name's Bond, James Bond". At last the hero of British intelligence has burst onto the computer screen.

His first computer adventure is based on the current Bond film "A View to a Kill", and like the real thing, the game is a big production.

It was originally designed by Tigress Marketing and was programmed by Softstone. The game is accompanied by the Bond theme which was digitised by Tony Crowther. Last but not least, the whole project was co-ordinated and the game sold by Domark, the company who brought you Eureka.

The game begins with the usual sequence of Bond walking across the screen, framed in a gunsight, but just in time he turns and shoots, then blood covers the screen. All this is accompanied by Crowther's version of the Bond theme which is impressive on the 64 version but only a recognisable series of bleeps on the Spectrum.

The program actually consists of three separate games based on parts of the film. The first finds Bond racing a car around Paris while tracking the evil Mayday who is descending from the Eiffel Tower by parachute. In part 2, Bond and his girl, Stacy, try and escape from the burning San Fransisco city hall. Finally in part three Bond descends into a mine shaft to disarm the bomb planted by the villain who plans to trigger the San Andreas fault. This would then destroy Silicon Valley making him the world's major microchip manufacturer.

After parts 1 and 2, you are given a code which reflects your performance in that section. This is then fed into the next part and the action continues. This means that you don't have to perfect one part before you can practise the others. However it does mean that you can't actually finish the game because you will be without some piece of vital equipment or have insufficient time to find and disarm the bomb in the mineshaft.

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Paris

The Paris module of the game is a Broadstreet style, car maze game in which you have to track Mayday to one of 16 possible landing positions.
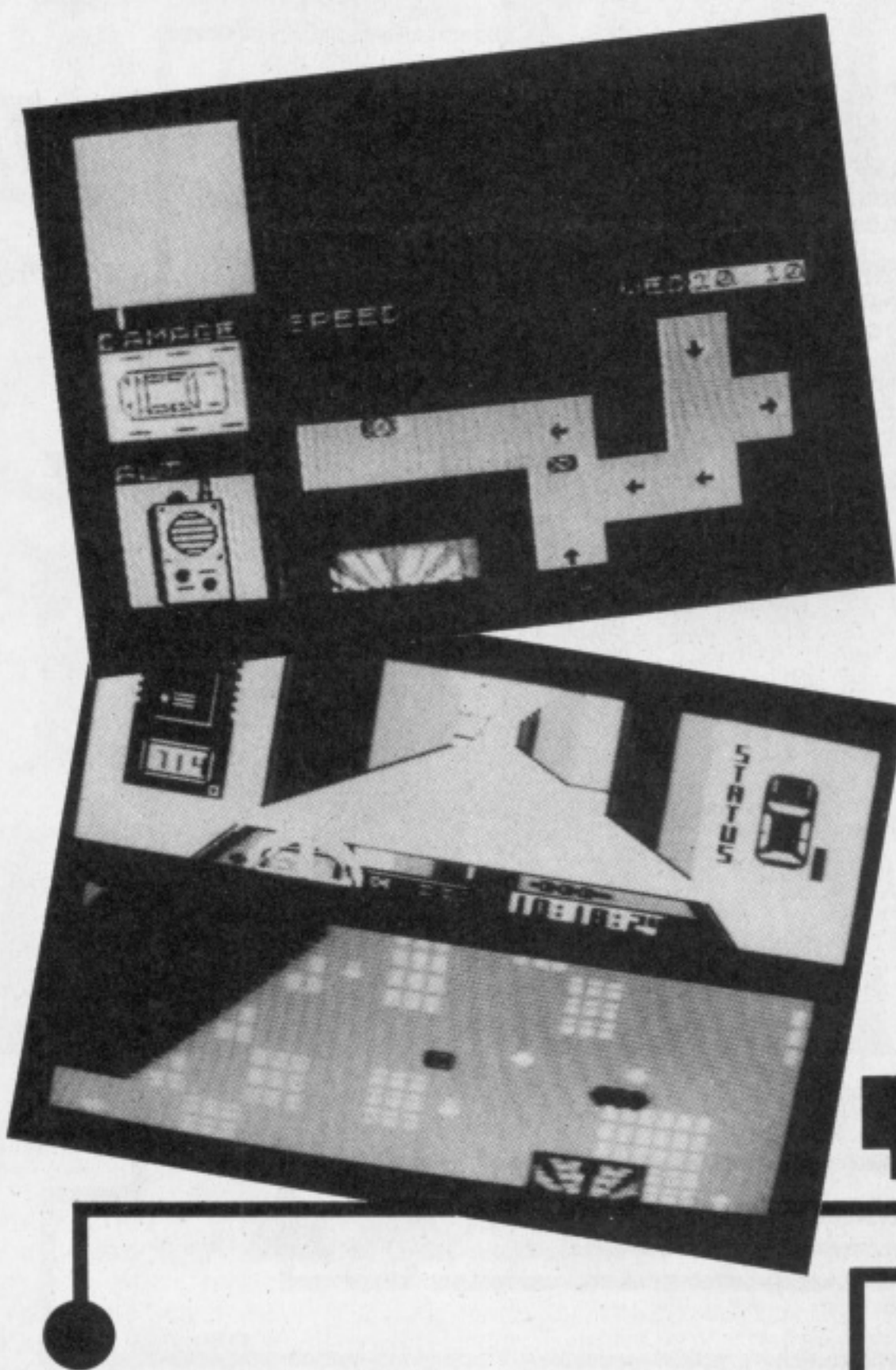
The screenshot shows how the display is divided into five areas. The bottom of the screen has a plan view of the area of Paris you are currently in. The corresponding 3D view is shown above it. In between the two, are you car's contols, including a steering wheel that turns as you do, a speedometer and a real time clock.

To the left of the 3D view is a tracking device that shows Mayday's height andto the right a display chowing the amount of damage the car has sustained.

Luckily, Mayday gives you a sporting chance to catch her as she circles the Tower before drifting off towards her destination. This gives you a chance to get into the centre of the road ready for the pursuit. This is important for if you drive too close to a wall, you'll find it difficult to turn corners which will halt your pursuit.

To add to your problems you will have to avoid numerous dead ends and the local police.

A few mapping excursions will soon locate the

part of the map to avoid whereas the police pose a more difficult problem.

These will pursue you if you exceed the speed limit or go down a one-way street in the wrong direction. Unfortunately, you will have to do just that in order to capture Mayday.

There are two types of police car, white and red. The white cars shouldn't pose to many problems. If they get in your way they can be quickly despatched by a couple of shots from your Walter PP45. The red cars are another story. Some of them possess remarkable acceleration and the best advice is to ignore them. At best they push you to close to a wall, making it difficult to turn or worst they will pen you in, ending your chance of completing the game.

I found Paris to be the easiest part of the game and was confident that I had a good code with which to enter city hall.

City Hall

City Hall is a full blown arcade adventure which would quite easily stand as a game on its own.

You are trapped in the city hall, and have to rescue the girl, before the fire that is spreading, engulfs you both. Again the screen is split into areas with the top left window showing the room you are in. Below this is a picture of city hall showing its windows and the fire which starts in the top lefthand window. Your own location is shown by the window that is shaded.

To the right of the room display is the date and time displays and above them the command and object duckshoots.

These are operated either under joystick or keyboard control and decide your actions in the game.

Using the command duckshoot you can select actions such as Examine,

Use and Give. The objects that you collect and use are stored in boxes in the other duckshoot and can be scrolled into view when required.

For example to pick up an object that you find in the game, simply move Bond to it then select the duckshoots by pressing the fire button (or corresponding key). When you select "Examine" a picture of the object will be displayed in the object display. Then by simply pressing the fire button the object is picked up and stored for later use.

It is important that you learn to use this quickly and efficiently as you can't afford to waste any time.

Your first problem is the fire. You can slow down the rate at which it spreads, by finding water buckets which you throw on the floor in the next room to be consumed. You may also find a fountain from which you can refill the buckets.

However this will only

slow its progress and before you have any chance to escape, you will have to find some way to put it out.

The dynamite strewn throughout the building is certainly not the answer as if it is left to near the flames, it will explode, spreading the fire even more. Consequently you should ferry this away to relative safety. Whatever you do, don't be caught to near the flames holding dynamite or they'll be looking for the next Bond.

You'll know when you're close to the fire because you'll slow down dramatically until you're overcome by heat. The room temperature is also displayed on the lefthand side of the screen but I found that I was too busy to keep an eye on that.

Obviously all this frantic activity takes its toll on you and so you will need some refreshment. This you will find in the form of a drinks machine and you're left

with the problem of how to get into it. There are a number of ways to do this but the only clue I'll give you, is that crime doesn't pay.

Before you tackle such problems you will have to navigate the rather tricky problem of getting around the place. This is difficult since most doors require either a key or security pass which the staff of city hall have hidden in the most unlikely places. Then again, if you find a door without a key or pass that fits you can also adopt for the subtle approach and shoot the lock off.

Be careful with this tac-

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tic, for as in the best films, you only have a limited number of bullets.

Finally in your travels you should also find the combination to a safe, numbers that form the security code to get you out, Stacy, and an item that will help you find the bomb in the final part of the game.

The Mine

This the third and final part of the game, was obviously inspired by the excellent Impossible Mission. Bond runs (footsteps echoing), jumps and falls around the disused mine where the bomb is planted.
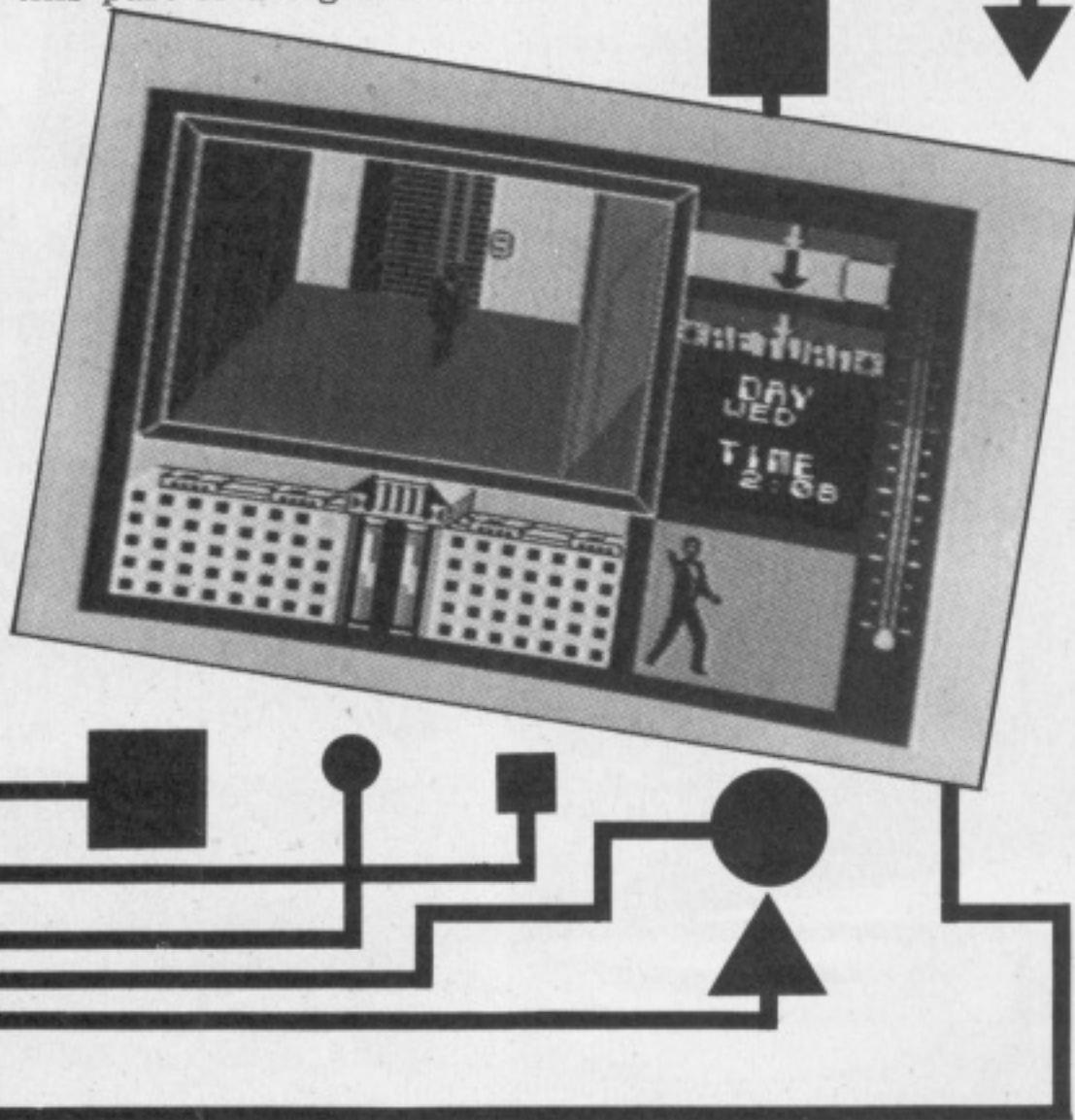
Your first priority is to collect some vital equipment that will help you find, the now converted Mayday, before you both try and disarm the bomb.

The most useful gizmo you will find is a rope complete with a grappling hook which can get you out of a number of tricky situa-

lies in the map of the mine but I didn't know what that meant either.

During your travels you will collect a number of objects including planks of wood, rope, handles and sticks of dynamite.

Dynamite when properly lit is extremely useful in this part of the game as it

You should take advantage of the ability to scroll the screen down (by pushing down on the joystick) to look before you leap. It is also worth climbing up your portable rope to scout around for useful objects.

To succeed you will have to be an incredibly agile Bond and perform feats more associated with Indiana Jones. I would have preferred to take the Roger Moore option and send in a stunt man to do it for me. Unfortunately they all seem to be fully booked and so I'll have to persevere. Perhaps someday I'll finish the game unscathed, until then, ''Geronimo!'' — ''AAAGH!''

Conclusions

A View to a Kill consists of three distinct games linked only by a code that is awarded to you in one part and passed on to the next. Only when you perfect all three parts will you complete the game.

I found Paris to be the most disappointing section but since it is fairly easy to solve it shouldn't hold you up for too long.

tions. The mine consists of a number of caverns and platforms dug out of the rock, punctuated by lifts and ropes.

Mapping this is a major task, but an important step to solving the game.

Again the screen has two duckshoots but this time they contain useful commands such as CALL LIFT and WINCH UP and WINCH DOWN.

The two winch commands are used to lower you down the shaft that contains the bomb but before that you have a lot to do.

For example you need to find something to be winched down in, Mayday to do the winching and the code that will disarm the bomb once you get there.

This is in the form of numbers scattered about the mine but once you find them, you still have to work out the order in which to input them. Apparently, the clue to this

can blowup sections of rock to allow access to other parts of the mine.

As in the other two sections of the game the screen contains a real time clock but in this instant, this will change to a time to detonation, when you find Mayday as she knows when the bomb's set to explode.

However it will take most players many hours to get to this stage as you have to learn how to get around the mine without too many uncontrolled plummets.

Luckily Bond always lands on his head and so recovers, however vital seconds will have been lost.

In comparison, City Hall and The Mine are good enought to stand on their own. Consequently the inclusion of them both, make the game excellent value for money.

I found the duckshoots easy to use and seeing the commands available, gave me some much needed pointers early on.

The graphics, particularly the animation, are exceptional and even the scenes in the mine scrolled smoothly on the Spectrum version.

The whole package is completed by the inclusion of the opening sequence and the Bond theme.

All in all, a thoroughly enjoyable game and all I want to know is when will Bond be back?

A View to a Kill is available from Domark for £10.99 in Spectrum, C64 and Enterprise versions. These will soon be followed by conversions for Amstrad and MSX computers.

THE GREAT M·U·L·E CHALLENGE

You could win an £100 software spending in the Virgin Games Centre in our search to find the champion Mule player.

M.U.L.E. is a curious mix of both arcade and strategy that attracts all kinds of games players and was featured in an indepth review in last month's Gamer. It was written by an American software house, Electronic Arts but is sold in Britain by Ariolasoft in both cassette and disk versions for the Commodore 64 and Atari computers.

One night in April four figures met to do battle to become the Computer Gamer M.U.L.E. champions. The players were Clive Brown (Ariolasoft), Dave Bishop (Tigress Marketing and Gamer contributor), Jeff Minter (Llamasoft) and Tony Hetherington (Gamer's illustrious Editor). After a keenly fought and often dirty battle Dave Bishop and Tony Hetherington survived to fight again as Gamers champions.

Now we are looking for six challengers to take on our champions in a knockout tournament to be held in Ariolasoft's offices in the centre of London.

The winner will be able to celebrate in a £100 spending spree in the Virgin Games Centre in Oxford Street. Although nobody will go home empty handed.

All you have to do to enter the challenge is to send in your witnessed high scores on the form below and the best six will be invited to do battle to become the Computer Gamer M.U.L.E Champion of Champions. The submitted scores should be achieved in a 12 turn game played at Tournament level between yourself, playing a humanoid, against three computer opponents.

In the event of any ties the first scores received will get preference. In the play-offs each champion will play against three challengers with the best two from each game meeting in the final. In the play-offs the players will have a free choice over the character they play. Good luck and may the best humnoid win.

DEVELOPMENT #1

YOUR MONEY EQUALS $600

AUCTION #2
SMITHORE
62   62

MONEY TRADED

Virgin

i6 GAMES CENTRE

COIN-OP CONNECTION

PLAYER 1
READY

600   20000   400   50000   2500   20000

ROUND   1   ROUND   1

Summer is coming and while most people seem to revel in lying half naked on a beach roasting, I'll be in the cooler climes of the local resort arcade.

As usual Mike Roberts had his finger on the button and Steve Phipps took the pics.

There are three games to look at this month, the first is one of the biggest money takers in the West End test sites — and it's easy to see why. The game is called Commando and you play the afore mentioned commando who has to penetrate various defences. Your enemies seem to be dressed in WWII German combat toggs but the helicopter that drops you off is jet powered? Something is odd here.

The initial animation is worthy of note. The chopper is perfectly detailed and fills up most of the screen. It then descends to earth and you jump out. The helicopter flys away and the little commando waves goodbye. During all this time the trees are bending under the influence of the downblast, and the branches wave very realistically.

When the chopper's gone the fun really starts. Your controls are the normal 8 way joystick and two fire buttons. One fires your machine gun that fires in short bursts. The other lobbs grenades a short distance and on contact will blow things up. You have a limited number of grenades, but you can pick more up at ammo dumps that you find scattered around.

The initial terrain is a sort of desert scene with cliffs and palm trees. You can hide behind palm trees and collect more grenades from behind a pile of sand-bags.

However you are not unopposed in this, many little men are shooting at you and throwing grenades. A nice touch is that you can shoot some guards escorting a prisoner, 1000 bonus points for freeing him.

As you progress through the game you come upon the wall of a fort that has someone on a motorbike chucking grenades at you — most unfair as he is too high to shoot. It is also defended by a mortar position.

Through the gates and the terrain turns rocky, so your enemy can hide behind them. There are more gates and more scenes later on such as an urban area, a mine field, and slit trenches. Vehicles can also appear, motorbikes, lorries, staff cars, and jeeps, all need to be dealt with.

This is a very exciting game and the quality of animation and graphics is superb. I will stick my neck out and say this is going to be one of the most popular games this summer. Already some thousands of units are set to move into the arcades — watch out for it.

Sequels department again, this time it's Dig Dug 2. And unlike most sequels this one is an interesting game in its own right.

All the old characters are there, the dragons and those other little creatures that I can never remember the names of and look like Biggles.

This time however, instead of a two dimensional side view of Dig Dug digging, you get a 3D plan view of an island with the nasties running around it. You are armed with a driller and have to drill away at posts placed in strategic places on the island. When you dig cracks appear in then ground. Arrange the cracks in the right way and chunks of the island fall off, in this way it is similar to a painter game, of course you still have the pump to graphicly explode all the nasties.

This is a very entertaining game that can stand up on its own merit very well, enjoyable, but perhaps not the same impact as Commando.

Hal if you remember, was the fictitious computer in 2001 and 2010, Hal 21 however, is a rather good computer game.

The layout is basically similar to Xevious, you have a shooting bombing craft with a cross some distance in front of you which is the aiming point for the bombs. Various targets fly towards you that can either be shot or bombed. The ground installations vary from tanks and boats to fortresses and gun emplacements.

The aerial craft vary — but all are extremely nasty, just some are nastier than others!

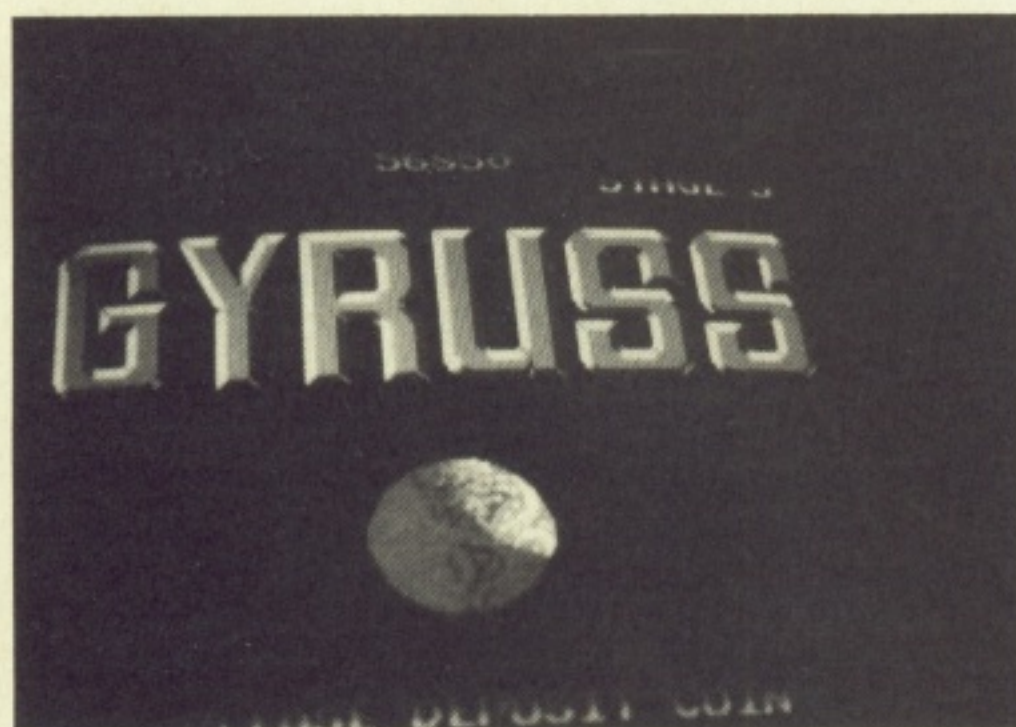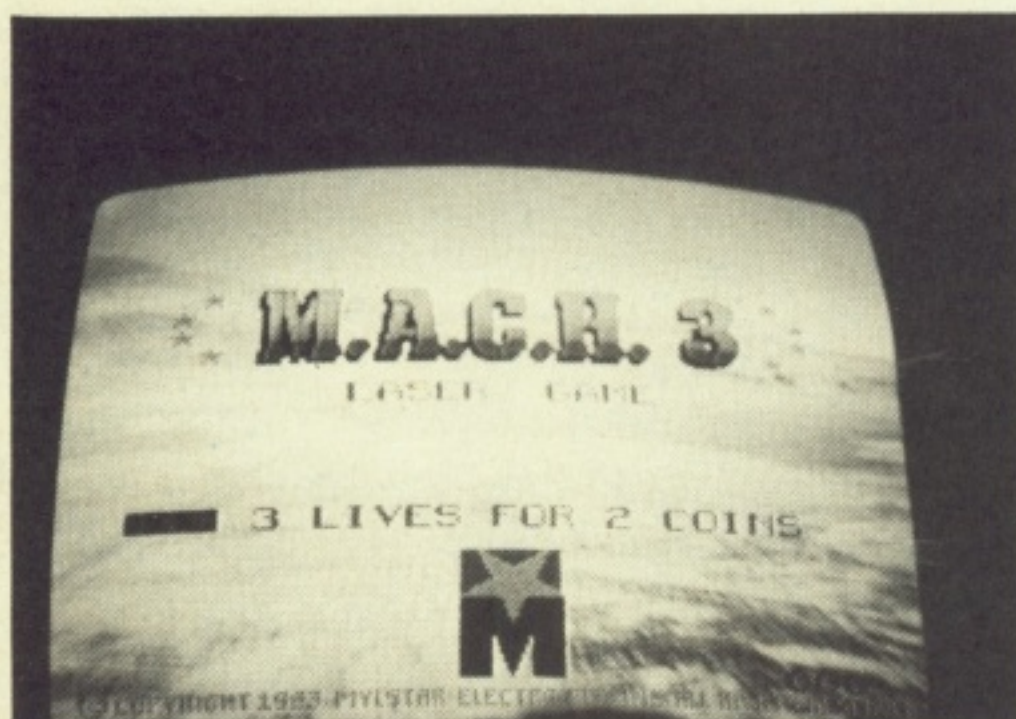One good aspect of this game is that two players can play at once — either co-operatively or against each other. This is a game for the hardened arcade player and I highly reccommend it. It isn't high on originality, but the graphics are great and the game play superb.

Thanks to all at Dieth Leisure (once again) especially Gary Neuman and Dave Piper (those long suffering souls) who let us disrupt their peaceful after-noons.

COIN-OP CLASSICS

Mike Roberts presents the pick of the arcade games.

Arcade games come and go, but there are some good old faithfulls that keep appearing year after year. Some of these games that appear are much imitated, take Defender for instance. There have been so many of this type that there is a whole genre that is labled 'Defender games' such as Scramble, Super Cobra, and lots of other 'horizontal' games.

Classification of any type of game is difficult but there are three main types of display with arcade games and it is through these that we can break down the thousands of games to a few long lasting classic games.

By far the most common method of screen production is via the raster scan method. This produces an image on the screen by scanning an electron gun across a screen. When you want a dot you turn the gun on and a stream of electrons make a part of the screen glow. If you use three guns with the three primary colours you can get a colour display.

There are so many of these games that it is hard to pick one classic game. So a shot list is in order. In the field of racing games for instance, Atari's Pole Position and its sequel Pole Position II were the first real racing games to put the player really behind the wheel of a Formula 1 racing car. There were other, such as Sega's Turbo, but none had the same feel. More recently TX1 has taken a great leap forward with its three linked screens and vibrating chair, but its high price (in excess of £2000) has put off most arcade owners.

Atari's Pac-Man will always be remembered for the almost mass hysteria that America went through a couple of years ago. It was once said that 'do you want to see my new Pac-Man pattern' replaced 'do you come here often' as the most common pick up line in the New York's singles bars. Personally I cannot see the attraction in the little man and his munching actions, but a lot of people do. There are a great deal of 'developments' on the original theme, but not many copies due to the fervour of Atari's legal department at the time.

Atari was sueing everybody over Pac-Man clones at the time so naturally there were not many attempts to cash in on the vast success of the little man. I remember one judge coming down in favour of Atari in a suit against Philips and saying that the Philips version was similar due 'to the similarity in the gobbling action of the main character'. There have been a number of variations, Ms Pac-Man, Baby Pac-Man, etc, and the latest which was looked at recently in Computer Gamer — Pac Land, this uses the characters without using the same (now long in the tooth) game play.

In the vertical type game, first started by Taito's Space Invaders all those many years ago, Galaxian or Galaga are still around along with more variations than could ever been imagined. These types of games were amongst the first to be in true colour — as opposed to black and white with coloured strips on the monitor. There are many variations on the same theme — ship at bottom, nasties at top swooping down on you. One of the most common is Pheonix — watch out for it.

There are lots of other raster games that you may come across — among them Spy Hunter, Buck Rogers, Donkey Kong, and Missile Command. In some cases they tend to be cheaper that the norm (10p instead of 20p), but they still give the same enjoyment.

The next development from the original raster scan was vector graph, vector graphic displays work by directly 'drawing' the image on the screen with the electron guns. This process must be done over and over again to 'refresh' the image on the screen. The advantage with this system is that you get perfectly crisp images on the screen — instead of being made out of small dots. However it is difficult to make solid objects. Most have to be line drawings only. It also makes it easier to produce 3D images. Until now it has also been difficult to add colour, but more later.

The first games to really use the vector graph technique were Atari's Asteroids and Battlezone. Asteroids used large outlines of boulders and a little dart shaped ship. The crisp images, and varied il-

lumenence levels were a surprise at the time, and tales have been told of week long, multi million scores on the game.

Battlezone, however, was an entirely different kettle of fish. It was the first real 3D game. The players view was in the first person, with all the baddies coming towards you in perfect outline.
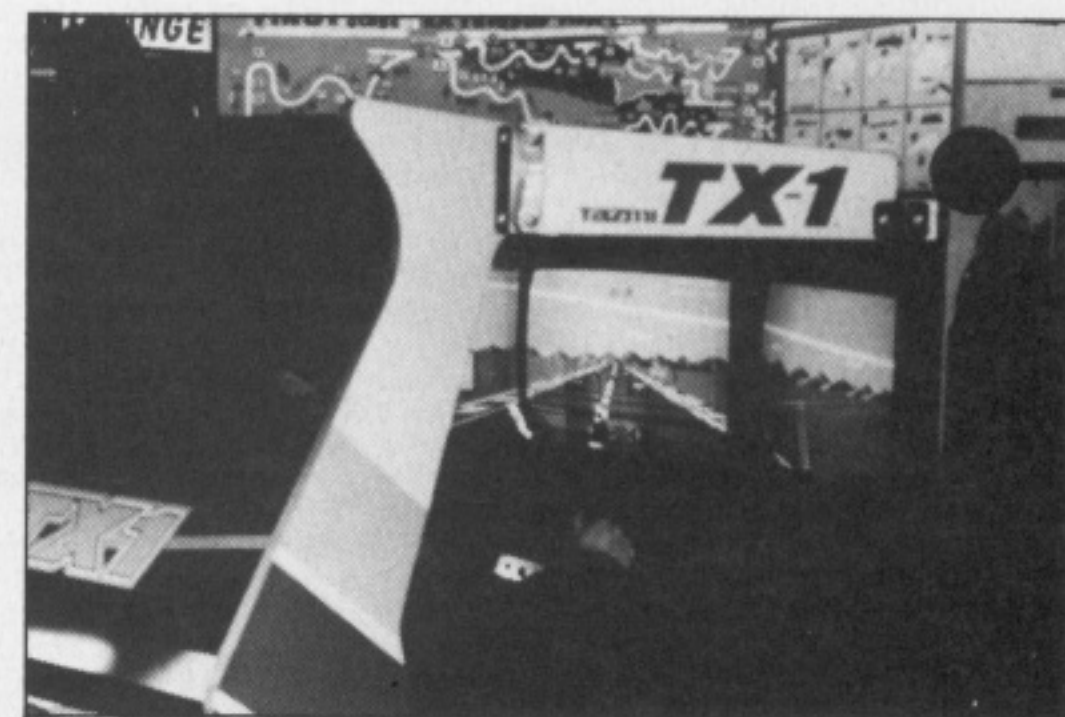
Nowadays you are more likely to come across the stunning Star Wars game by Atari. This was the first colour vector game, and to my knowledge the only one. The game uses eight colours by having three electron guns in the same way as a colour telly. There is also full stereo sound and voice synthysis — "May the force be with you" Obi Wan bellows into your ears.

This game comes in two types, the best is the sit-in type where you climb into your X-wing fighter and experience the destruction if the Death Star yourself. This game has been around for the last year or so and is still quite common, well worth 20p.

A year or two back the arcade world was stunned by the introduction of a game called Astron Belt. This used a technique called interactive video disk to produce an image on the screen. In this case it was from a Japanese science fiction film that was never finished. The space scenes were taken for the game and put onto the video disk.

A video disk is similar to a record, except that each track has a TV frame on it. A laser scans these tracks and produces the picture. The interactive bit of this is where a computer is controlling the laser. Thus, by picking which track is displayed, any desired sequence can be produced.

Onto this is mixed a standard computer video display of your ship etc. Whatever you do with your ship is echoed in the video disk generated background display. Explosions of your

ship are handled by the video disk (and very graphical it is too) but knocking out of the enemy ships is done by blanking out the video display of the enemy by putting a computer generated splat over the enemy ship.

This game was rather limited as the video disk was not designed for it, however this is still one of my favourite space games. Later games such as MACH 3, and Fire Fox had custom designed sequences for them and the gameplay was much better. What really was interesting was the work by Don Bluth and Atari with Wizards Lair, Space Ace, and the more recent Super Don Quixote. In this the movements on the joystick are mimicked on the screen by the cartoon characters, there is no computer display interaction except for the status and score display.

Dragon's Lair and Astron Belt are definitly classics and landmarks in the arcade scene, and as they are quite old the price of a play is comparable with the normal type of game. These games are usually more expensive, as the equipment and original capital layout for the operator is higher — he needs more 10p bits being shoved in to get his money back.

That concludes my 'golden oldies' roundup of the computer scene, most of these games can be seen at the resort arcades that are dotted around our coast and where most of you will be spending your holidays — me? I'll be down the local arcade in Broadstairs keeping cool whilst the rest of them roast to death and turn red on the beach!

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COIN-OP CONVERSIONS

Simon Rockman rounds up the best of the computer versions of arcade games.

Since the early days of computers, people have wanted to play games. It was in the mid-70's that Nolan Bushnell realised that demand was so great that he could charge for the pleasure When micro-computing was in its infancy the cost of the hardware was so great that the amount of money the machine would take was not enough to pay for the cost of the circuitry. When he saw a cheap processor board offered for sale Nolan realised that game dedicated machines were viable. The company which was founded to fill the clubs and bars of California was called "ATARI".

The next step was the exodus of the electronic beasties to the home. In America three companies massed to enter the consumers homes. These were, **Commodore, Atari and Tandy**, in the UK Sinclair also joined the battle. It was logical that the games software found on the arcade machines should follow the hardware into the home.

As the business of persuading the fussy arcade game player to part with his quarter (or 10p) became harder the standard of the games improved. Home computer programmers scrambled to keep up, sometimes they would convert the very latest arcade games sometimes they would produce versions of old favourites to run on new micros.

Nearly every micro has a version of "Space Invaders" or "Breakout" (The new Atari 520ST even has a Breakout game you can play in the middle of doing other things) but with some of the more complicated games it is harder to produce a really good version of an arcade classic. It is the mark of a really good programmer and of a really good software house that a player who is good at a particular game in the arcades can easily master the micro version.

The Game Players find Difficult

Defender is a game which taxes the finest arcade games players. To play Defender well is an art, and it is only the huge popularity of the game that ensures that there are many experienced players. History has to thank Eugene Jarvis of Williams Electronics for writing (inventing?) Defender. Because it is such a popular game Defender is an obvious candidate for conversion, any software house with an eye to the bank balance will want to produce a game which will sell. There are loads of versions of Defender for micros. Perhaps the most famous is **Planetoid** which was written by Neil Raine for Acornsoft. This was originally called **Defenda** but the threat of a lawsuit from Atari was great enough to persuade Acornsoft to change the name.

Planetoid takes the credit for being the first good home defender-type game. Acornsoft Planetoid runs on a BBC model B (the Electron version appeared a long time later) and was one of the very first Beeb programs to appear, it showed what could be done on the computer and must be responsible for some of the success of the machine. When a first-time user buys a shiny new BBC B he usually takes a copy of Planetoid as well. When Atarisoft moved into producing software for the Beeb they decided that Planetoid was so good that it would be unwise to produce a rival version. Alligata software did not agree with this point of view and produced **Guardian** for the BBC, Electron and Commodore 64. Guardian differs from Planetoid in that the graphics are less like those of the Jarvis original but the playability is better. The scrolling is smooth, the explosions almost worth getting blown up for and the movement flicker free.

On the Commodore 64, Guardian has less in the way of opposition. The main rival to Alligata Guardian is the official Atarisoft Defender. Atari may produce some wonderful arcade games and some beautiful software for the Atari micros but their Commodore 64 stuff is dreadful. Defender uses sprites to such a large extend that it is only possible to have eight objects on the screen at once. The upshot of this is that opeining a pod when there is a lot going on has little effect. If most of the sprites are being used only a couple of swarmers appear. The whole point of swarmers is that they swarm. The Atarisoft game is far too easy and has some massive bugs in it, when your ship blows up the sprites are expanded, nothing wrong with that, but if you hit STOP and RESTORE during the explosion then all the sprites stay expanded. This means that in the next game you have quadruple size ships, aliens and humans. Yuki.

The new Amstrad micro has only one version of Defender. Fortunately this is from Alligata and plays well. Called **Defend or Die** it has stereo sound and follows the Arcade original fairly closely. There are some bugs in the program which mean that Hyperspace can have unpredictable results and your laser carries on firing past an

alien, this means that you can take out a whole row of landers in a single swoop. Defender is a modern classic, the home versions have out-lasted the arcade originals, how long before we see it converted to some of the newer micros, the Atari ST and Commodore AMIGA, we may even see an Enterprise version.

The Hidden Classic

Missile Command is an unusual game. You have to protect bases, not attack them. Unfortunately very little is seen of the best micro versions of this game. **Ground Zero** is a version of this game for the Apple Macintosh and the best version for a home micro is **Missile Control** from Gemini which runs on the BBC model B. Gemini hide this light under a bushel, preferring to sell boring business packages. Ground Zero does not pretend to be a 100% clone of the arcade game, the cities are drawn in 3D and there is greater variety of enemy craft, including a kamikaze dive bomber. The Gemini game is much closer to the original, even down to the stunning end sequence. The game is, however, a little spoilt by the high score routine which plays "Congratulations". The arcade original uses a large trak ball to move a sight across the screen. On the Macintosh you can only play the game with the mouse controller but you have the option of either using the mouse button to fire from the nearest base or using the /,z and x keys to select which of the three bases to fire from. The Beeb version is similar in that the Z,X

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and C keys can be used either when under keyboard control or when using the analogue joysticks, in fact this is one of the few games which benefit from the use of those ghastly Acorn devices.

More than Space Invaders

Orlando wrote **Arcadians** for Acornsoft, this was an excellent version of **Galaxians** — seen by many as the logical successor to Space Invaders — so when he set up his own software house he produced a version of the sequel to Galaxians. In the arcades this was called **Galaga**, Orlando named his version **Zalaga** but followed the game play and the spirit of the original, if not the complete storyboard. One of the major features of Galaga is that enemy ships can capture your fighter which you can then rescue by shooting down the offending enemy. Completing this operation gives the player two ships on the screen and so doubles the fire power. Zalaga runs on the BBC, not known for its elaphantine memory, and so the game plan had to be shortened a little. Instead of allowing a ship to be captured by an enemy tractor beam and then rescuing the craft a zalagan pilot simply has to enter the beam to be awarded a twin ship. It is worth noting that the newer version of Zalaga — Electron Zalaga has many improvements. The sprite movement is slicker and the feel beefed up. Even if you already own Zalaga it is worth buying Electron Zalaga for your Beeb. It may sound a little over-enthusiastic but Electron Zalaga is the best of the left/right/fire shoot-em ups.
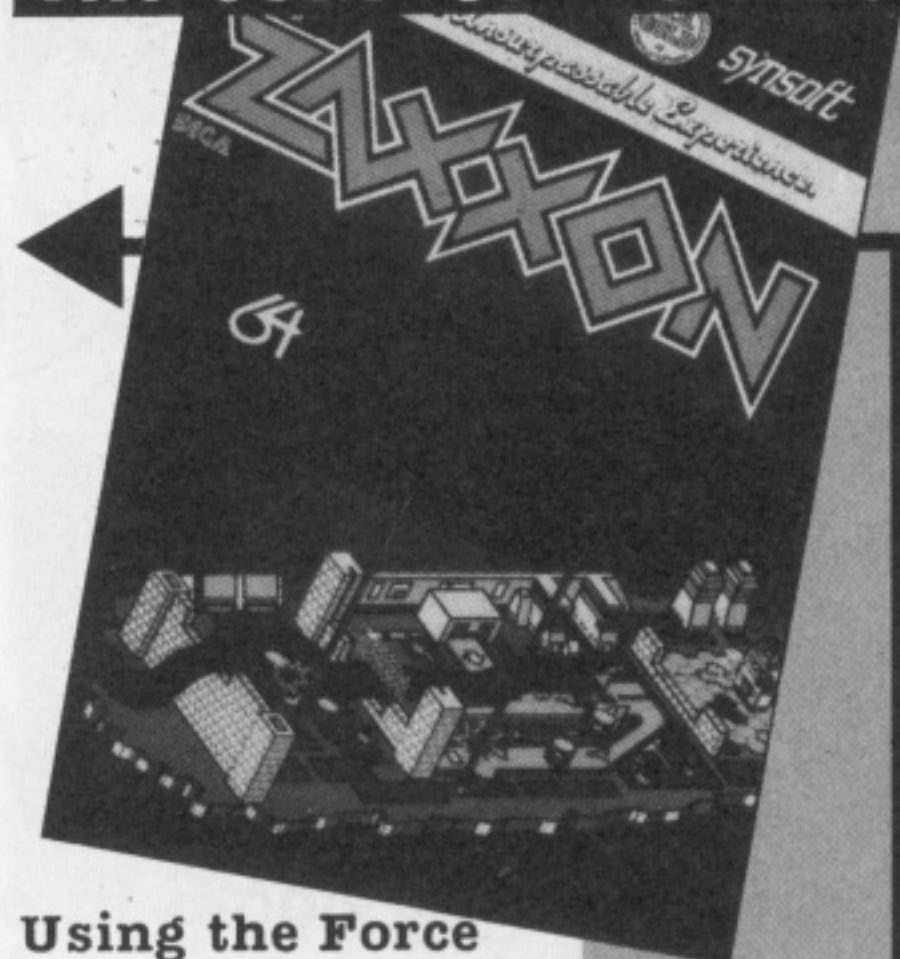
Space Capture

The fundamental difference between home computer games and arcade games is that the latter is designed to take as much money as possible, to play as many games a day as it can without each player feeling cheated. For this reason some games which flop in the arcades make great home computer games. One of these is **QIX** (pronounced kick's), in this game you control a line. Using this line you have to box off areas of the screen. Attempting to stop you are two nasties around the edge of the screen. They will encroach on any complete box. In addition to these hazards there is a thing called a sparx, this tumbles around any unfilled section of the screen and will destroy you if your line should touch it before a box is completed. Qix is a game of speed and strategy. Practice is the most important ingredient of success at Qix. Learning the patterns which allow you to capture the maximum amount of space takes time. If riding up this learning curve is costing the player a lot of money he will give up. Because the player using a home computer has already made the investment in the software there is more of an incentive to practice. The best computer version of Qix is Stix from Supersoft and runs on the Commodore 64. This is a very simple game but passes the ''just one more game'' test admirably.

Who You Gonna Call?

Tank Busters from Design Design is one of the best new games for the Amstrad CPC464 (it also works on the 664). Based loosely on **Battlezone** it is a tank game played in the first person, that is you sit in the tank and peer out at the terrain. Enemy tanks slide across the ground and will home in on you. It differs from the arcade game in that you only have one life but your shields can take enough of a hammering to survive enemy shells. You have a choice of shells or wire-guided missiles with which to repell your foes. The game is in Amstrad mode 1 but uses interrupts to show more than the usual four colours. The arcade machine uses a vector display (like that used by Asteroids and Tempest) and so mode 1 with its square pixels is ideally suited to replicating the effect. The explosions are second to none, even the obstacles blow up and shatter into convincing lumps of shrapnel.
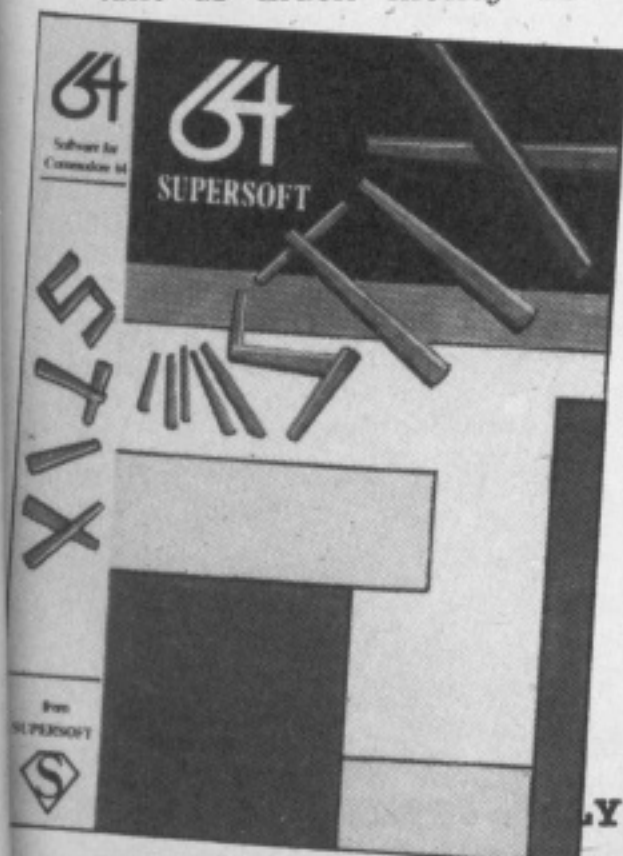
Using the Force

There are a few games which are so stunning that programmers look at them in their arcades (some programmers even claim the cost of visiting arcades back against tax — it is a business expense!) and say that the games cannot be converted for modern micros. It is then that some smart guy — who doesn't realise it is impossible goes and writes a micro version. Perhaps the best example of this is **3D-Starstrike** from Realtime Software. This is a version of **Star Wars** for the Sinclair Spectrum. The program emulates the vector display beautifully. Always aware of the threat of Atari lawsuits the program is sufficiently different from the arcade original to be safe. The programmers arrogantly say ''If we wanted to write Star Wars we would've written Star Wars''. The Amstrad version is not quite as good as that on the Speccy due to the way in which the screen memory works (but if Design Design can do it...). The speed at which the ships move across the screen and the fireballs fly is impressive. The second screen consists of towers and hostile bases the third of a trench with catwalks to be dodged. In the third screen of the arcade version it is possible to get a bonus by not firing until you reach the end of the trench, this is known as ''using the force'' and has been omitted from Starstrike.

The most impressive games to have appeared in the arcades recently are Marble Madness and Postboy, both based on the new Atari modular system. It may be possible to convert them to the ST and AMIGA but on current micros — never. Unless you know better?

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COIN-OP CHRONOLOGY

The boom in computer games began in the arcades. Mike Roberts plots their history and development.

It's hard to imagine that there had to be a beginning to all this computer games stuff. As we all know, the huge boom in computer games started in the arcades and even now the computer manufacturers look towards those little havens of noise and bright lights for most of their games ideas and technological innovations.

If it wasn't for video games and arcade games we wouldn't be here now — well, at least I would be racing pigeons instead of blasting the meanies.

Where did it all start? Well the chap in question was (and probably still is) called Steve Russell. In the early sixties — yes it was really that long ago, I wasn't even born then! — he created a game called 'Space War'. This was played on an MIT computer. MIT is the Massachusetts Institute of Technology, and is the mainstay of American technical innovation.

It was at this university, and on one of their computers that the first game was developed. It is believed that this game was similar to the 'Star Trek' games of today, but I am not certain of this and have never seen the game.

At MIT with Russell was a chap called Nolan Bushnell. He decided to produce a coin operated version of the game. At this point in time it is worth mentioning what arcades were like. Most of the games were mechanical, one armed bandits really were — you pulled the arm and the money came out, or didn't as the case may be.

A little company called Sega (remember Zaxxon, Turbo, and Buck Rogers) had a game with a helicopter where you took off and landed. It was a real helicopter on the end of a cable. There were motors and propellers on it to keep it aloft and various obstacles in the sort of 'tank' it was mounted in.

The Bushnell game, called Computer Space, was a bit too radical in design — people just didn't know what to make of it. That and the anti-war feeling in America at the time which was one of the hallmarks of the sixties, caused the game not to be the commercial success that it could be.

Bushnell stepped back, licked his wounds and went back a few steps to a simpler concept that was also competitive whilst being non-aggressive — Pong. Everybody must have played Pong in one of its forms. The original was simply two bats and a ball. There were two knobs on opposite sides of the unit and the two players could control the position of the bats in a vertical axis and thus bat the ball between each other. Points are scored when your opponent misses the ball. If a rally got too long the amount of 'spin' that the bat would impart on the ball would increase, and increase again later on. This ensured that the game got increasingly harder and that nobody would hog the machine for too long.

Pong was an instant success and until the mid-seventies it dominated the arcades. The games got slightly more complex, tank games for instance where the idea is to avoid the ball rather than hit it!

Pong games were the original home video games, they were dedicated units, this doesn't mean that they were excessively loyal to their owners, but that they only had one game with a number of variatioins and no possibility of changing them. It was really this that started public awareness of computers and the games we play on them.

The next development was the programmable home video game, this was called the VCS or Video Computer System and was launched with a single cartridge that had similar games on it to those already on the more common video games. However, the promise was there for more cartridges in the future, the system also had colour — incredible and all for about $300.

Nolan Bushnell also was the inceptor of this, he created a company that was named after the Japanese for 'check!' as in chess — He called it Atari, where have I heard that name before?

That was in about 1976-1977. The thing that brought havoc to the arcade industry came in 1978-1979 from a Japanese company called Taito. It was called Space Invaders and we have been shaking from the effects ever since.

I shan't bother to describe the evil little green men, as everybody must know them by now. If suffices to say that the game caused a shortage of the 100 yen coin in Japan when the game came out over there. It is also worthy of note that after Space Invaders went the most popular game in their arcades was a form of bagatelle, a mechanical game.

Space Invaders had a number of sequels and the development of the idea

behind it continued with Pheonix, Galaxian, and others with one two major developments — colour, and individual 'personalities' for each of the types of meanies attacking.

Another game riding on Space Invaders' back, for an entirely different reason was Moon Rescue. This game was specifically designed to simply replace the ROMs in the original Invaders machine. The controls were also kept left, right, and thrust. This extended the life of the Invaders machine and is a technique still used today, but for different reasons. Nowadays the electronics in a game are quite cheap. The expense comes with the display, coin mechanism, cabinet etc. So a swop of the main circuit board is economically necessary from time to time. it also explains why most games come in the same cabinets.

The next in the line of games went back to black and white with Asteroids. Asteroids came out in 1981 and was a whole new concept due to the vector graphic display with its sharp lines and smooth animation. The psychologists got in here too. With Space Invaders it was the rhythmical music that brought you back time and time again. With Asteroids it was the slow almost graceful movement on the screen that convinced you that if it went that slowly then why did you hit it, so you go back for another go, and another, and another.

Battlezone cropped up in late 1981 as well. This was the first real 3D game out, and is still one of the best tank games that you can find. Not only did it require you to shoot, but you needed some strategy to arrange your priorities so that you shoot the most dangerous enemy first. Battlezone was one of the first games to make people think. Nowadays, of course, your brain is doing as much work as your fingers.
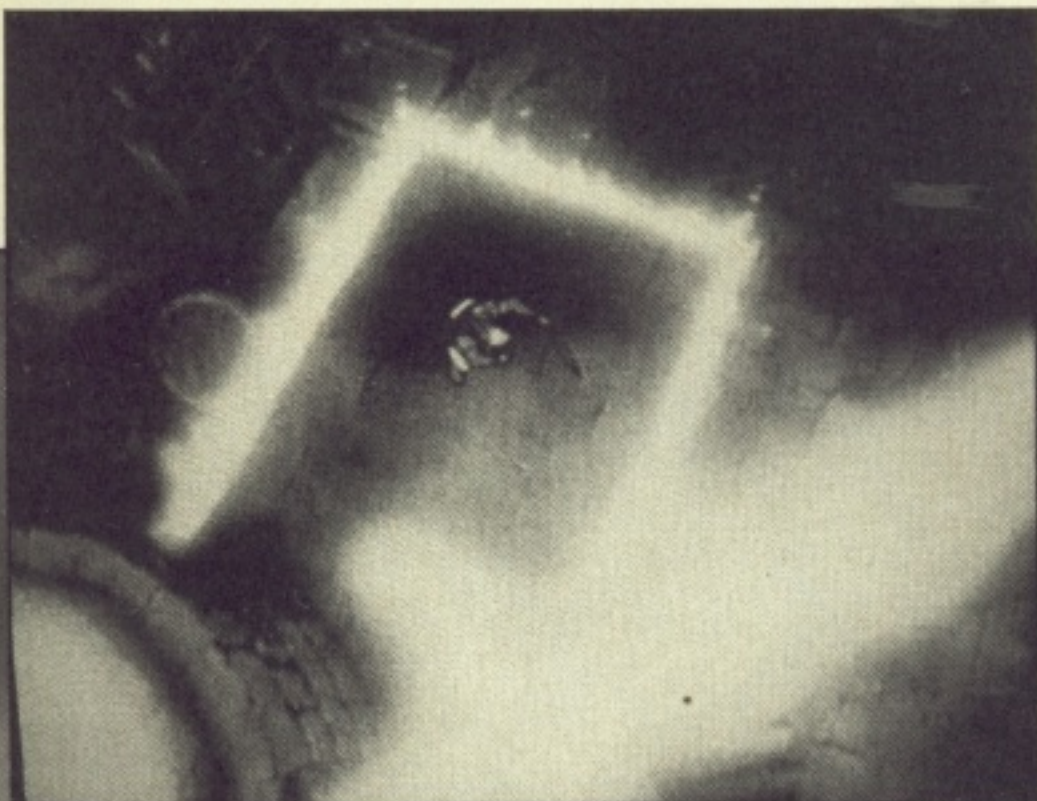
1982 was a very busy year for arcade games. Defender, Pac-Man and Missile Command showed up. All these games were landmarks and show the linear, but very fast progression of the technology of the time. Missile command used a radical new controller, the trak-ball with this you flick a large sphere around and control a small cross on the screen. And when you press one of the miltiple fire buttons the object does not disintegrate, but there is a time lag as your missile snakes up towards your target.

Defender was written by ace designer Eugine Jarvis, he also wrote Robotron 2084, and Stargate — a sequel to Defender. In Defender the emphasis is on protecting other objects that your self, the humanoids — in a similar manner to Missile Command's cites to be protected. Defender is one of the biggest successes of all time, despite the opinion of operators initially that it would not take off due to its complex controls!

Pac-Man created mass hysteria in America for the two years after its launch. Everybody was playing it. Since then the maze game has gone onwards and upwards until maze games can get very complex indeed. Dragon's Lair can probably trace its roots back to Pac-Man.
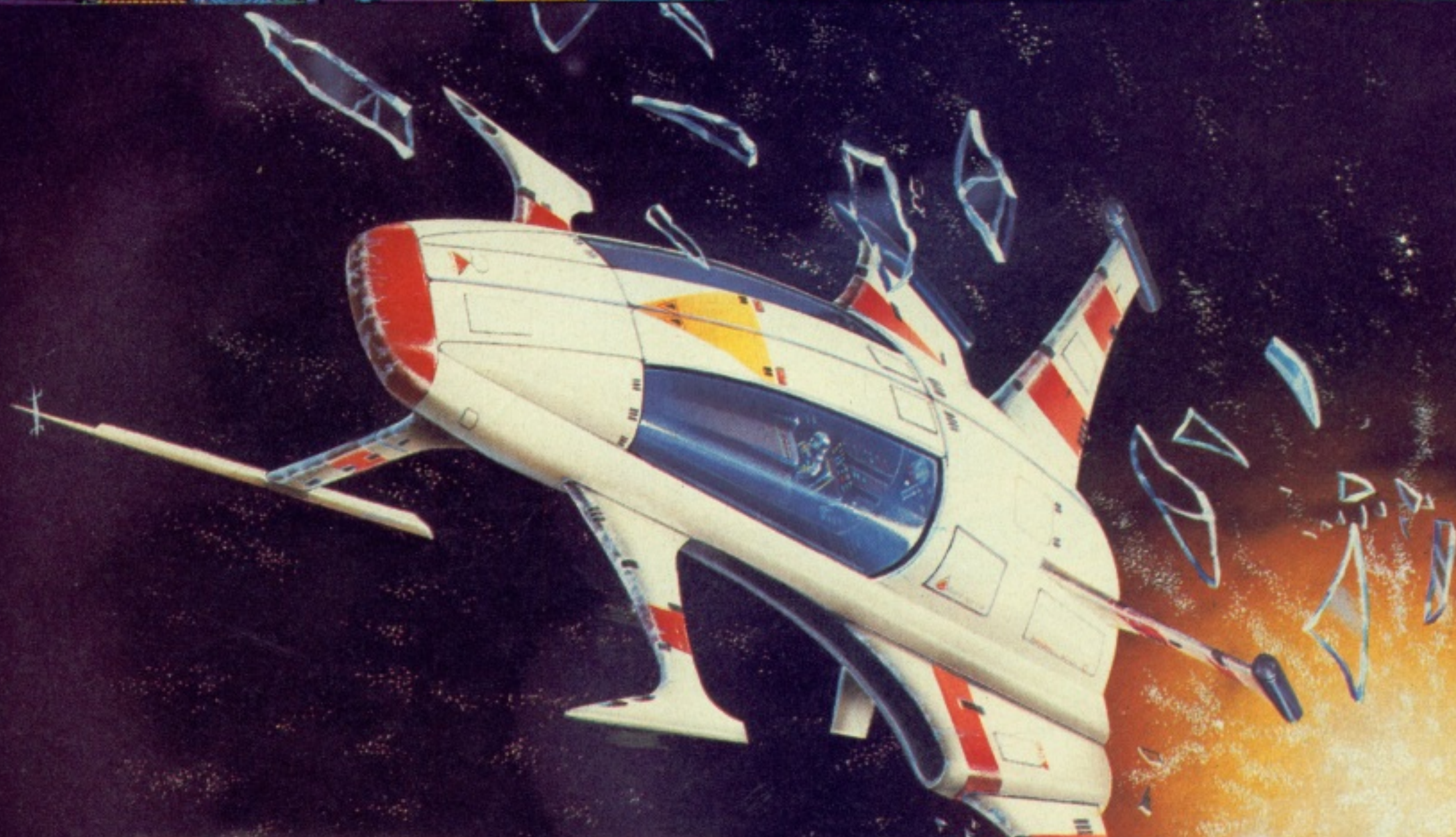
In the three (gosh is it only three!) years since then the arcade world has gone a long way. Forthcoming developments will be covered in our regular column 'Coin-op Connection'. I wonder if the next five years will bring as much technical advance. You never know, holograms and all that, are still yet to come on the scene — though some companies are known to be developing them. Who knows what might have happened if Atari had continued their Mindlink project? . . . .

A history of games

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
	The Dark Ages of Pre-game Barbarism									The Dawn of Post-computer Civilisation
Arcade Games — Raster scan / Computer space	Pong, Tank Battle	Space Invaders	Moon Rescue, Colour Games →	Galaxian	Pheonix	Defender, Pac Man, Missile Command	Stargate, Pole Position	Robotron, Marble Madness, TX1, Kung Fu Games		
Arcade Games — Vextor Graphic				Asteroids	Battle Zone		Star Wars	Star Wars		
Arcade Games — Video Disk						Dragon's Lair, Astron Belt	Mach 3, Subroc, Firefox	Super Don Quixote		
Video Games	Dedicated Pong Type Games	Colour Games →	Atari VCS	Mattel Intellivision	'Add-ons' for video games from third parties become available	Intellivision 2, Coleco Vision	Atari 5200 (no UK launch)	Atari 7800 (abandoned), Atari 2600jr (re-launch), Mattel stop production, Coleco stop production	Home computers effectively kill off dedicated video games	
Computers	Space War MIT Mainframe, Imsai, Altair (first kit micros) 8K era	Commodore PET, Apple, Tandy TRS80	MK14, Acorn 1	16K era, UK101, Atom, Atari 400, Atari 800, T199/4A	Commodore VIC, Cartridges become popular	32K era, BBC MICRO, C64, Spectrum, Oric	Electron, 64K era	Amstrad, C16 +/4, Cartridges die out, Atari XE	Atari ST, Disks become popular, 128K era	

EINSTEIN

COMPETITION

The Einstein is a powerful disk-based machine with a huge range of software, including a challenging selection of games. you could win a collection of hardware and software worth over £1500 in our easy to enter competition.

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Tatung and Computer Gamer are giving you a chance to win a package of Einstein hardware and software worth over £1500!

The prize not only contains a 64K Einstein computer but also a colour monitor, 2 Cookridge computer joysticks, and a WS 2000 modem donated by Miracle Technology which will allow the winner to log into Prestel, Telecom Gold and Bulletin boards.

The prize also includes a selection of the hundreds of programs available for this machine with the emphasis heavily on games. These include games from Anirog, Bubblebus, Terminal, Software Projects, Electric Software, Myrddin Software, Solo Software, Kuma and of course, Einsoft. Indeed the winner of the competition will also receive as a gift from Einsoft, one of the first copies of Einstien Elite as soon as it is finished!

All of the games are supplied on Einstein disks and so there's no waiting round for the fun to begin. Finally the winner will also recieve a football pools predictor from Bell Software and the Tasword word-processor supplied by Tasman Software.

How To Enter

All you have to do to enter this competition is study the eight screenshots of games on an Einstein and then match them up with the list of a selection of available Einstein games, and the names of the software house, that you think wrote it.

Then fill in the corresponding letters on the entry form. For example if you think screenshot 1 is Jet Set Willy by Software Projects then fill in CC next to screenshot one on the coupon.

Then as a tie-breaker finish the sentence "I like to play games on the Einstein because..." in not more than 15 words.

When you have completed your entry, send the whole coupon to:

Computer Gamer (Einstein) Competition
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London W1R 3AB
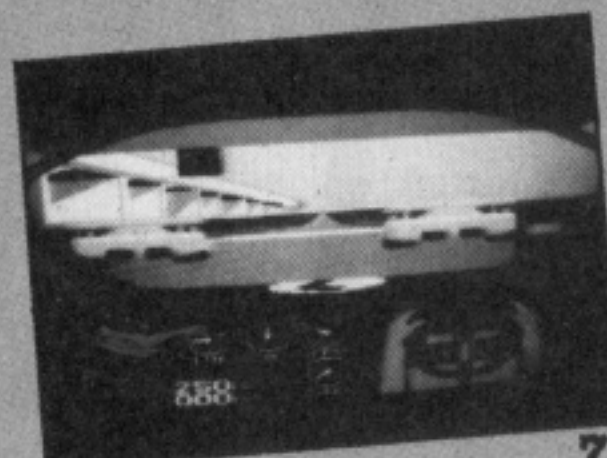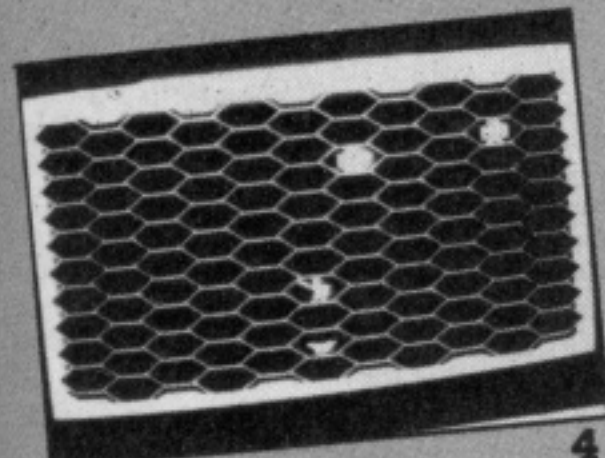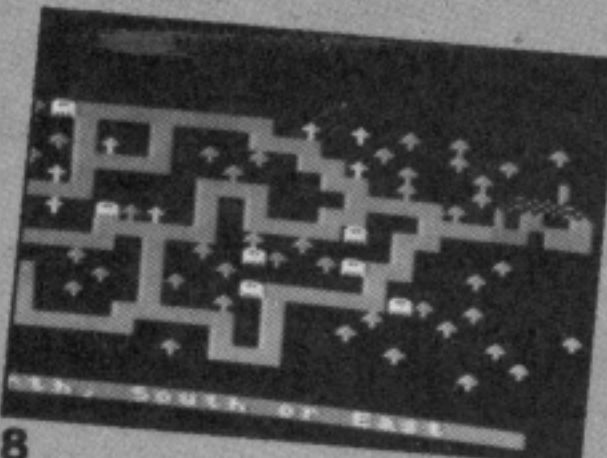
All entries must reach us by July 31st.

1

2

3

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8

Games Titles
A. Elite
B. Le Mans
C. Jet Set Willy
D. Norseman
E. Flics
F. Manik Panik
G. Chuckie Egg
H. Boardello
I. Space Trap
J. Nightmare Park
K. Hunchback
L. Flight Path 737

Software Houses
A. Einsoft
B. Bubblebus
C. Software Projects
D. Anirog
E. Konami
F. Firebird
G. Kuma
H. PSS
I. Electric Software
J. Solo Software
K. Ocean
L. CRL

Computer Gamer (Einstein) Competition, 1 Golden Square,
London W1R 3AB.

Screenshot 1_____   Screenshot 2_____

Screenshot 3_____   Screenshot 4_____

Screenshot 5_____   Screenshot 6_____

Screenshot 7_____   Screenshot 8_____

"I like to play games on the Einstein because..."

....

....

Name ....

Address ....

....

....

Age .... Tel: ....

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ARCHON

Archon is a strategy game based on chess but where each piece is a fantasy creature and every square is fought for on a combat screen. Nick Walker takes an indepth look at this game that's now available for Atari, Amstrad, Commodore 64 and Spectrum computers.

Remember the holographic chess-like game played by C3-PO and Chewbaca in the film 'Star Wars'. Each game piece was a projected fantasy creature and a dispute for a square results in a real battle between the pieces. They must have been playing Archon.

Archon is a strategy game for the Atari, Commodore 64, Spectrum and Amstrad computers, similar to chess with fantasy role playing characters as pieces. Set on a 9×9 squares playing board, the object of the game is to control five power points on the board or totally eliminate your opponents pieces. Unlike chess, two things set Archon apart from other strategy games. Firstly the two opposing sides, light and dark, have totally different pieces that, on the whole are balanced in strength. Secondly a dispute for a square doesn't result in the defending piece being quietly removed from the board but a separate arcade-like combat arena where the pieces battle it out.

Basic Strategy

Archon's strategy screen is a board of 9×9 squares, whilst 48 of these are always white or always black, the other 33 vary in brightness from black and white and back continually throughout the game. The strength of a piece in battle is partially dependent on the colour of the square your piece is on. Light side pieces are harder to defeat on light squares than on dark ones. Conversely dark side pieces are stronger on dark squares and weaker on light ones.

Two important tactics come out of this, firstly keep your pieces on their corresponding colour whenever possible. Secondly launch your attacks so that the peak of conflict is when this 'luminoscity cycle' is to your greatest advantage. Remember the cycle is at its peak for two turns, use both turns to your advantage.

The five power points are indicated on the screen by flashing red symbols, there are four mid-ways of each side of the board and one at the centre. As well as being the points to capture to win the game these points have strong healing capabilities for weak pieces injured in combat. So even if you don't plan to capture all five immediately it is worthwhile placing a weakened piece on the power points when the luminoscity cycle is in your favour.

Archon is won or lost in the combat arena, whilst strategy is important, a good player in the combat arena will aways beat a good strategist. Action in the combat arena is immediate and simultaneous; there's no taking turns here — victory depends on your arcade skills. Movement around the combat arena is via joysticks and pressing the button readies your weapon and immobilises you, the direction of the attack is then selected with the joystick. Not until the button is RELEASED will the attack occur.

Combat is of three general types. Knights and Goblins, the pawns of Archon are sword-swingers and club-weilders, they must be within sword or club distance to inflict damage. The Banshee and the Phoenix radiate a circle of fire or a piercing wail respectively, damage is inflicted while the opposing piece is within this circle. There is no need to select a direction for the attack with these pieces. All other pieces throw missiles at

THE COMBAT ARENA

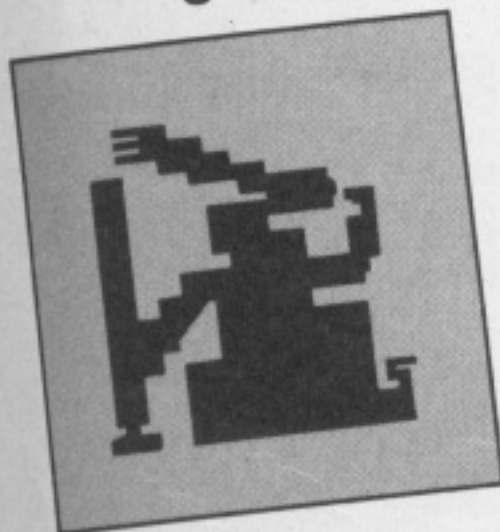|			
VALKYRIE	ARCHER	MANTICORE	BANSHEE
GOLEM	KNIGHT	GOBLIN	TROLL
UNICORN	KNIGHT	GOBLIN	BASILISK
DJINNI	KNIGHT	GOBLIN	SHAPESHIFTER
WIZARD	KNIGHT	GOBLIN	SORCERESS
PHOENIX	KNIGHT	GOBLIN	DRAGON
UNICORN	KNIGHT	GOBIN	BASILISK
GOLEM	KNIGHT	GOBLIN	TROLL
VALKYRIE	ARCHER	MANTICORE	BANSHEE

INITIAL STRATEGY SCREEN

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various strengths and speeds.

Two vertical bars on each side of the combat screen represent the strength of the battling pieces. When a piece is wounded in battle its corresponding bar is reduced, when this bar is gone the piece is dead and the battle is over.

As I said earlier, mastery of the combat screen is probably the most important aspect of Archon, if, like me, you do not possess lighting reflexes on a joystick there are a number of features you can use to put up a good battle. First and foremost — know the pieces, both your own and the enemies. Each piece has distinct combat abilities, a table of the pieces is given later in this article. Whilst combat may seem all fast and furious neither you or your opponent can fire fast and continuously, it takes a moment to ready a weapon. The computer rings a bell when your ready to attack again. Exploit this time to pace your attacks and to find the times when your opponent is unable to retaliate.

Don't be afraid to play the coward on the combat screen, hiding behind rocks until the right moment to launch an attack is often an effective form of combat. This strategy is made all the more effective by the luminoscity cycle that these rocks themselves go through. Normally a rock is imprenetrable, however for a moment the rocks are the same colour as the background, at this moment it is possible to throw a missile or walk through it. If you lose a battle, your opponent returns to the strategy screen, launching another attack on the same piece gives it little chance to recover , practice against it until you can consistently beat it with pieces of similar strength.

The Light Side

devasting fireballs, these in my mind are not as effective as a couple of the dark sides strongest pieces so do all you can to stop attacks from these creatures. In combat keep him at mid to long distance and in the open, as his fireballs are easily effected by the barriers. Do not move him from the home power point without good reason as this opens him up to the dark sides magic spells and frees the power point.

Archers — the archers arrows are not fast, so she must get close to do serious damage. The archers are ideally suited to take advantage of the luminoscity cycle on the combat screen. Try and pick opponents that are slow and cumbersome to give a greater range.

Unicorns — the white horse of mythology is probably the strongest piece with a blinding bolt shot of energy from its single horn. Use its speed and fast shooting to stay a long distance from the enemy. Respect its ability and use it for your important battles.

The Wizard — the wizard is an ancient man of vast supernatural powers and the most important piece in the light side. In battle, the wizard throws fairly

The Djinni — the Djinni is a magical being from another dimension and the second of the really strong pieces of the light side. in combat use this piece aggressively and 'Get stuck in'.

The Phoenix — the Phoenix is a flaming bird of immense size and power. In battle it explodes to a circular mass of flames, the nearer the enemy is to centre of this fire the more damage it does, so get as close as possible. The Phoenix cannot be harmed whilst it is generating a fireball so keep them coming as quickly as possible.
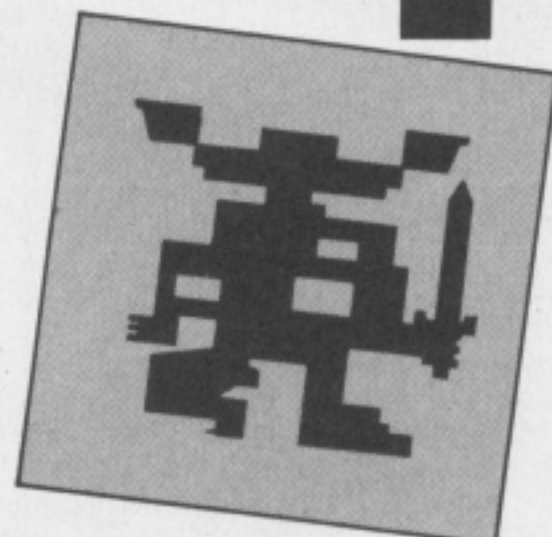

Valkyries — are beautiful blonde war maidens from the legions of Valhalla. The speed of their attacks can be infuriatingly slow, use the rocks to plan your attack when your enemy can't fire back. Tease your opponent into taking a shot at you and then fire back. Avoid open areas.
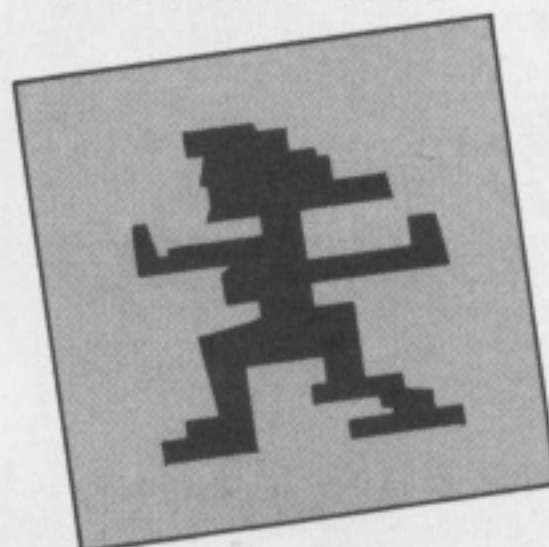

Golems — Golems are big, strong, slow and thick. For weapons they tear boulders from the ground, if you manage to get a hit with one of these boulders the damage will be pretty dramatic so keep trying. It takes time to rip a boulder from the ground so get in close and be aggressive. At least they are thick skinned enough to take this kind of close combat.

Knights — I was always taught in chess to never underestimate a pawn, the same is true for the Knights of Archon. While a single blow from one their stronger foe can kill them it is not unknown for a knight to kill the likes of a dragon or manticore. The secret is to develop an erratic in and attack, out and hide strategy. Do not stay still or move in a straight line for one moment.
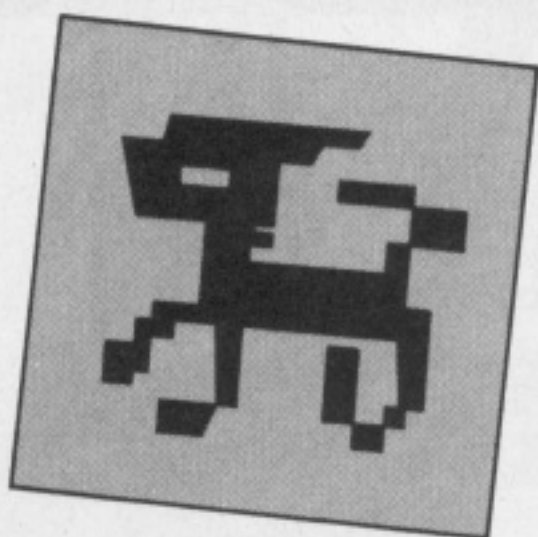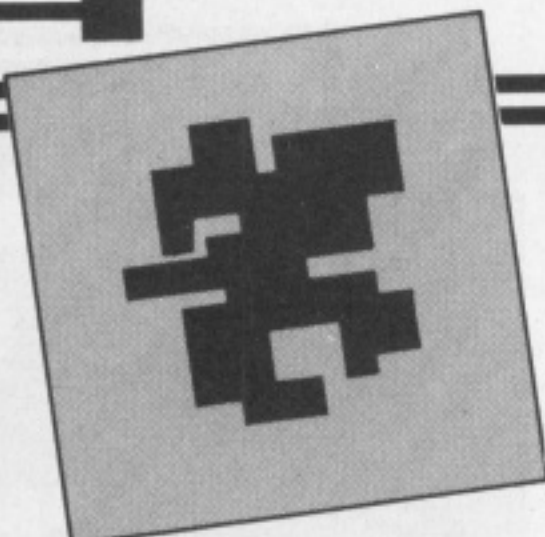
The Dark side

The Soceress — the equal of the old Wizard in power, the Soceress is eternally young and beautiful. Her lightening bolts are swifter than the Wizard's fireballs making her a more deadly opponent in combat. Play defensive using the barriers and corners to capture an opponent off guard and then zap them. Don't stray from the black power point without good reason.
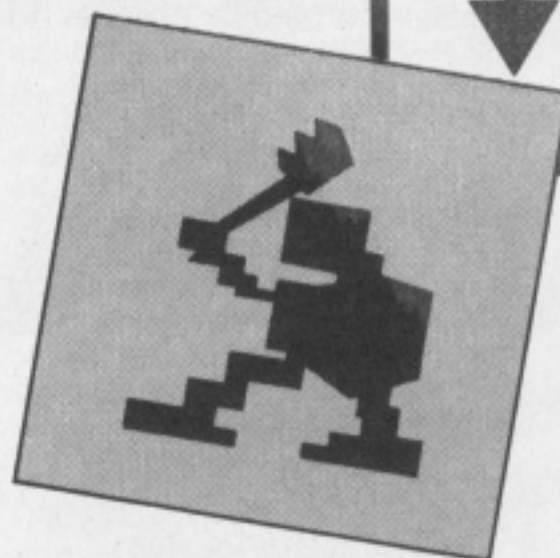
The Basilisk — in many ways the equal of the lights side Unicorn the Basilisk is a crested reptile. In combat follow the same guidelines as the Unicorn using its speed of firing and movement to stay at long range. Interestingly for a scaled reptile the Basilisk seems more suceptible to damage than the Unicorn.

The Shapeshifter — the shapeshifter is a demonic creature that takes the form of anything it attacks. The great problem with this piece is that your opponent is bound to find a way to attack with a lesser piece such as a knight and take out a strong piece with a mere knight. When using this piece for combat yourself only pick dark squares and important pieces of the light side. Not one of my favourite pieces.

Goblins — Goblins are hideous creatures of twisted limb and misshapen feature. use the same stratgey as for Knights. In Knight/Goblin conflicts it is possible to block an attack with your own sword or club.

Trolls — Trolls are slow moving creatures that throw rocks, trees or anything else that comes at hand. Get in close and use the fact that Trolls are hard to destroy, to your advantage.

Manticores — The Manticore is a cross between a lion and a scorpion, its tail contains an array of spikes which can be thrown at the enemy. These spikes cover a wider area than most other missiles making them difficult for the enemy to avoid. This makes it useful to have in the front line of any attack and especially effective in wiping out weaker foe.

The Dragon — a monstrous serpentine creature, this piece is in my view the strongest on the entire Archon board. Don't be afraid, find an open piece of ground and use its fast and flaming breath to zap in all eight directions.

Banshees — The Banshee is an undead spirit that attacks with its ferocious wail. My personal favourite the Banshee has the great advantage that once you have intiated an attack you can chase after your fleeing opponent, great fun. The Banshees requires a lot of skill to use successfully but it's worth it. Attack from the side where the wail is at its most effective.

Magic

There are seven spells available to each player, only the mages of each side, the Wizard and Sorcerss can cast spells. The same spells are available for both sides and spells cannot effect power points. Magic is probably the greatest factor in strategy, each spell can only be used once, so timing is critical.

The Spells

Teleport — this spell teleports any one of your pieces, any distance to another square. This spell is useful in the early stage if the game as an aggressive opening for transporting a powerful piece to the rank and file of the enemy, to destroy as many pieces as possible before your opponent has time to move them to the safety of their corresponding colour. Alternatively later in the game the spell could be used to transport a powerful piece to the hub of a battle or to remove a wounded piece from the scene of a battle.

Heal — this spell instantly heals any piece of any wounds it has sustained in the combat arena. Do not waste it on pieces over power points or on pieces unlikely to be attacked in the near future. Never heal the Shapeshifter as it regenerates for each battle.

Shift Time — this spell has two possible effects. Normally it reverses the flow of the luminoscity cycle, however if it is cast at peak lightness or peak darkness the cycle will be shifted to the opposite extreme. Its uses are many and varied, use it to extend the lengthen of imprisonment (see imprisonment spell below), to stop the advantage of an attack or

lengthen the time available for your own attack. To really upset someone, use it to change the luminoscity cycle at the peak of an attack. Don't be tempted to apply Shift time immediately after your opponent, if you withstand there use of it you will be in a much stronger position.

Exchange — This spell causes any two pieces on the board to change places. Use it to frustrate your opponent by swapping an aggressively placed piece with a more innocuous one.

Revive — This spell restores a piece killed in a previous combat. Restore only strong pieces and avoid placing them on an unfavourable square or it may be killed again immediately.

Summon Elemental — This spell lets you generate a temporary adversary in an attempt to kill off a particularly troublesome piece. Along with the spell Imprison these two are the spells you really must cast at a mage that has wandered from its power point. There are four elementals earth, air, water and fire. As far as combat is concerned treat Earth as a Troll, Fire as a wizard, Air as an Archer and Water as a Manticore. There's no point being particularly cautious with an elemental, there's no way it will be around after the battle.
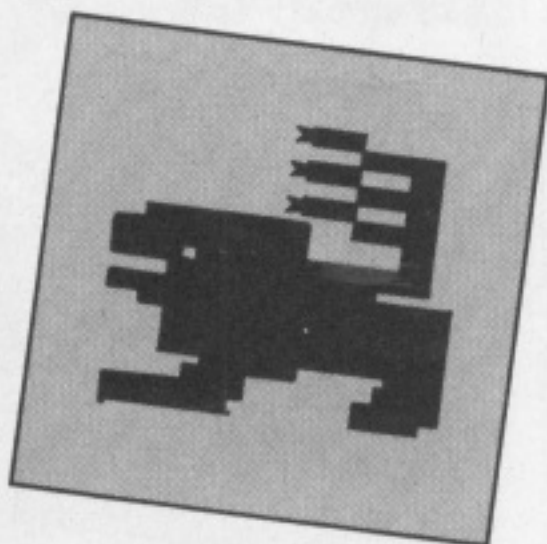
Imprison — This spell pins an icon down to the square it is on, when the spell is cast. The spell only lasts until the luminoscity reaches maximum brightness or darkness for the piece on an unfavourable square whilst you finish it off or to blunt an attack.
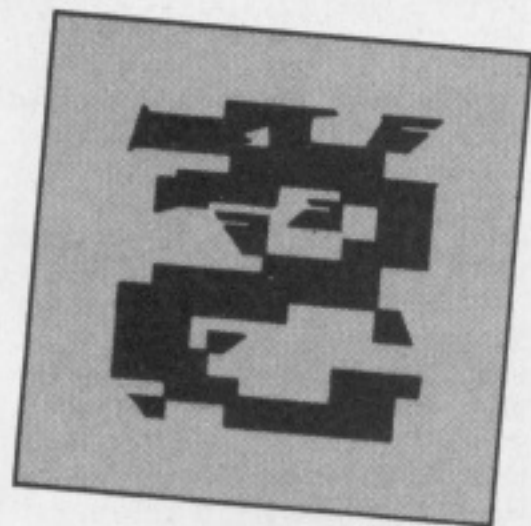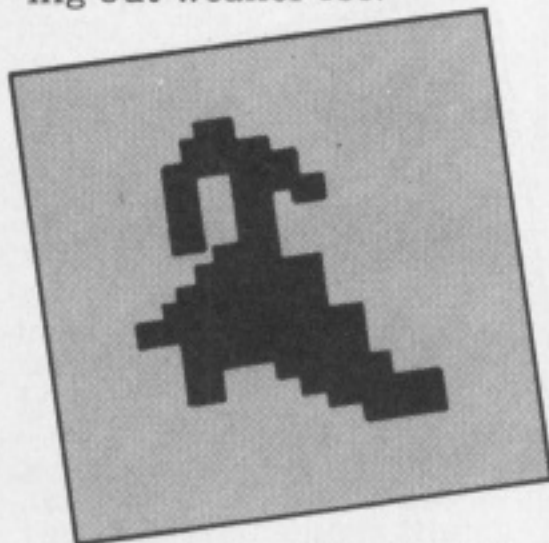
Prices and conclusion

To beat a good player or for that matter the computer at Archon, the key is concentration. Exploit every facet of the game that gives you an advantage no matter how small. Archon is available for the Spectrum, Atari, Commodore 64 and Amstrad, the review was written on using the Atari disk based version and some slight differences appear between the three versions. On cassette Archon costs around £11.95 on disc for the Commodore 64 or Atari it costs £14.95, and it's worth every penny.

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                          POST CODE
PHONE NUMBER 01-254-8352
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ACCESS TO DISCS NO
YOUR MAIN GAMES INTEREST: ARCADE/ACTION ✓
                          ADVENTURE
                          STRATEGY ✓
                          SIMULATIONS
                          OTHER (SPECIFY)
WHAT COMPUTER MAGAZINES DO YOU BUY? CRASH
WHAT OTHER MAGAZINES DO YOU BUY? SINCLAIR USER
WHAT TYPE OF FILMS DO YOU WATCH? ?
WHAT TYPE OF BOOKS DO YOU READ? ?

REVS

Revs is Acornsoft's excellant racing car simulation, Mike Roberts shows computer gamers how to play it.

Revs is one of those odd games that cannot really be called a game. It bears a much closer relation with the flight simulator games that have flooded the market since the year dot. In fact it was written by the author of one of the best flight simulators ever — Aviator.

The game itself was reviewed last month, so this month I am taking a closer look at some of the odder points about the game. The manuals and instructions are copious and very informative, however they do have a very marked racing slant and could be very confusing to the normal run of the mill computer user.

When you first get it out of the box, take a look at your joysticks. If they are the standard Acorn type then either throw them away or attempt to wrap them in rubber bands. Your controllers need to be self centering, that is when you release the stick it will spring back to the center line — very useful

I am of the opinion that Revs cannot be played except via the joystick, you can try to use the keyboard, but the game was obviously designed to be used with sticks — and if you haven't got any, then why not?

One problem occurs with the switch type of joystick, it makes the game very hard to play. Imagine trying to drive around using maximum wheel lock on a car — it would make it nearly impossible and certainly very dangerous, the same happens with Revs.

Starting

Starting the engine can either be simple or a pain in the neck. When you first start a practice lap or the race then it is very easy. The directions in the manual recommend revving up the engine whilst the car is in gear, but with the clutch in operation. When the desired amount of wellie is achieved you let out the clutch and roar off. However when you smash yourself up the engine may be a bit hard to start. In this case the recommended action is to put the car in first gear (instead of neutral) for starting. Turn the engine on and rev it up a bit, then flick it into neutral. When it goes into neutral it will start up normally.

Straights

These are quite simple, you just go straight. However it is a good idea to take stock of your status, get your revs and gears right, and position yourself for the next bend. It is also a good time to overtake. Overtaking on the straights is simple in as much as the enemy car is totally predictable in its actions and if you challenge it it will not try to block you or otherwise oppose your actions. It will just carry on as normal. However it will not try to hit you, this can be used to our advantage.

Lap Time 0:24   Best Time 10:00.0

Wings

A lot has been made of the adjustable wing settings on the game. They affect the handling of the car quite dramatically. High settings on them mean that the steering will be that much more sensitive. A low number on the front will make the steering a bit more sluggish, good for people who are used to throwing about the joystick. It is impractical to use switch joysticks except on setting zero for the front. The rear must always be high, otherwise it's like driving on ice. I tend to use 35/15 because I am used to throwing about the stick. David Hunt, who had a hand in the technical aspects of the game usually uses 32/28 for lighter controls and a more responsive car. However if you are anything like me, using this setting will make you run off the road at corners.

Spins

A quick word about spins. When you go off the track you have almost certainly had it. If you are still moving and in the right direction then keep on going, but do not make any sudden moves with the steering. You should then get back on the track.

If you go off the track and start rotating then you can recover in some circumstances. If your velocity in a perpendicular axis away from the track is high then you might only spin once before you hit the fencing. However if it is low then you may spin four or five times. You should be able to recover from this. What you do is to reduce your throttle to low, but do not violently brake. Then when you see the track go past push it forward to maximum, when the track has passed, reduce it to low again. After two or so of these manoeuvres you should be in a better position, or even on the track, fully recovered.

Chicane

If you ever try 'jumping' the chicane then a small tip is to turn the steering to a full left lock just as you take off. Then when you land you will have a better chance of ending up pointing the right way.
Happy Racing.

On the bend before the straight or about a third of the way through one of the longer straights, make sure you are in third or fourth gear and at about 6000 — 6500 rpm. Then you zip up next to the opposing car. Position yourself on the inside of the other car relative to the next coming bend. Then whack your revs right up and change gear up as fast as possible. Due to your high revs you will have an increased acceleration and be able to zip past the car. This should be timed just before the up and coming bend. If you are on the inside of the other car and it is on the outside, then it will not be able to take the corner so fast as it is nearer to the outside kerb. So it must slow down and pull in behind you. On the next straight you can compound this by roaring off into the distance.

Corners

Corners can be a real pain. The line that you take can be extremely critical, not only to keep you on the track, but the wrong line on a corner can drop your revs, making you change down even to get them back up again, and generally lose many seconds of lap time.

As far as speed is concerned there are three very wide corners with long straights on either side of them (Maggots, Chapel, and Abbey), these can be taken in fifth, at full whack by taking the inside line on the approach. One bend that you can take at full whack, but the positioning is very crucial (Club corner), and three really awkward corners where positioning is very crucial and your speed must be reduced to a low level to get around at all (Copse, Stowe, and Becketts). On these corners if you find yourself slipping, pull back on the joystick. This reduces your turning circle and stops you skidding.

When you hit a position crucial bend the best idea is to push your joystick through half of its throw. Then if you start to lose it you can use the rest of the possible joystick movement to correct yourself. All bends should be taken on the inside. To see perfect or near perfect positioning have a look at the opposing cars. On a practice lap, instead of overtaking the slower cars follow them around the track. The lines around corners they draw are always very good. Remember they only go off the track if you hit them so they have to be good.

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HI-SCORE

One or two people have written to me saying that a score they sent for a game that doesn't feature on our list, hasn't been printed or that a marginally lower score has been printed as opposed to their higher score.

Well there are reasons for both of these. If we are not featuring a game then we will generally not print the score unless it is a good one, however, we do rotate the games so that everybody gets a crack at the whip. This month most of the entries were for one or more of the Decathalon games, but we have added lots of new games and deleted some older ones.

The reason for the second question is that a marginally lower score will beat a higher score if there is a photograph to accompany it.

I also has one letter complaining that he had beaten my hi-score on Atari Pole Position, but on the C64. Why, he asked, was he not featured because the games are the same. Well we treat different computers under different headings because the gameplay is usually different. This is a case in point as due to a bug in Pole Position on the Atari there is a physical limit to your score (at about 112000) and no more is scorable. This does not happen on the C64.

Remember to enter, all you have to do is fill in the appropriate space provided on the page, get another person to sign it to say that they have witnessed this (a screen shot would be prefered and takes priority).

Then send the entire page to:

**Hi Score
Computer Gamer
Argus Specialist
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1 Golden Square
London W1R 3AB**

Good luck.....

Game	System	Scorer	Score	Your Score
Pole Position	VCS	M Roberts	64780	
Battlezone	VCS	T Powell	56000	
Centipede	VCS	T Powell	26005	
Mario Bros	VCS	J Ellis	33600	
HERO	VCS	T Powell	33745	
The Empire Strikes Back	VCS	T Powell	3247	
Smurf	VCS	J Ellis	2200	
Pitfall II	VCS	D Raee	100502	
Snapper	BBC	R Brown	145000	
Chuckie Egg	Spectrum	W Lacey	2170710	
Knight Lore	Spectrum	A Parkinson	96%	
Death Star Interceptor	C64	D Boyd	250000	
Decathlon (Ocean)	C64	R Moulds	74000	
Decathlon (Ocean)	Spectrum	M Reynolds	95893	
Bio Defence	Atari	M Roberts	13800	
Confusion	Amstrad	S Green	47500	
Pole Position	Atari	M Roberts	108950	
Pole Position	Spectrum	B Cooper	95000	
Pole Position	C64	D Edwards	120830	
HERO	C64	P Edwards	1000000	
Raid On Bungling Bay	C64	M Roberts	165800	
Elite	BBC	D Codrington	1343777	
David's Midnight Magic	C64	G Hamlett	711385	
Ghostbusters	C64	S Dennison	313600	
Cyclone	Spectrum	A Parkinson	62020	
Seaside Special	C64	S Payne	1470500	
Bruce Lee	Spectrum	M Roberts	240560	
Dropzone	Atari	S Phipps	68230	
Donkey Kong	Atari	J Prince	35100	
Spy Hunter	Spectrum	I Whittaker	188410	
Jet Pac	Spectrum	C West	1231670	
Pitfall II	C64	P Goodridge	155328	
Decathlon (Activision)	C64	P Goodridge	11784	
Raid Over Moscow	C64	P Ford	172800	
BC's Quest for Tyres	C64	D Jolley	8455	
Staff of Karnath	C64	K Mundow	7.22	
Defender	Atari	C King	2746800	
Impossible Mission	C64	D Edwards	29883	
Psst	Spectrum	S Spencer	120840	
Pajaramarama	C64	K Barber	93%	
Q Bert	Atari	D Stephens	89750	
Moon Cresta	Spectrum	M Makin	89910	
Spelunker	C64	M Roberts	138750	

SPELUNKER

000750

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P.B.M. UPDATE

Welcome to a new regular series in Computer Gamer in which we follow up last month's introductory article on play by mail games.

Each month we will bring you the latest PBM news and details of any new games that start. Computer Gamer will be joining a number of the games and so we will bring you first hand knowledge of how the games work along with our progress (or lack of it) in them. If you have any comments or suggestions about this column then please address them to PBM update at the normal editorial address.

What is a PBM Game

For those who missed last month's Gamer, a PBM game is one that you play by post.

They are loosely related to computer adventures, in that you are given a character (or characters) to control, with which you explore a world.

However instead of entering your instructions into a computer you send orders to a Games Master (GM) who processes them before sending a report back to you.

Although this is slow, in fact some games last month's, if not years, they are incredibly detailed and players get so involved with them that they eagerly await the morning post.

Some games have only 25 players, where as others have nearly a thousand, which explains why most are computer moderated.

Obviously processing even 25 orders takes a lot of time and so PBM games companies charge on average £1.50 per turn. Therefore when you consider some games have

turns every week its not a cheap hobby but it is an enjoyable one.

PBM News

Mitre Games, of Tribes of Crane fame, are launching two new games. In the first, Midgard, you are the second son (or daughter) of a nobleman. Unfortunatley, the first son is to inherit all the family fortune, so you are given an army of 200 men and sent to seek your fortune elsewhere. During the game, you will no doubt fight battles, enlist armies or even run foul of the many religious groups.

Midgard's game reports promise to be something special as it is to be run on a Macintosh.

Global Supremacy is their second launch and is set in a post WW III world in which 82 players fight for survival and finally global supremacy.

ICBM are currently converting their games onto British computers. Their games such as Starweb were actually run in America with ICBM, acting as a post box.

In September, when the conversions are complete the games players will benefit by quicker turn round times.

KJC Games have launched Capitol which they believe is the most advanced computer moderated PBM game in the UK.

It is to be run on a 512k IBM pc and is a space conflict simulation.

PBM Competition

In our first PBM Competition we are delighted to be able to give away six months play in either Capitol or KJC's fantasy game, Earthwood.

To succeed in a PBM game you will have to outthink other postal players and so we have devised a competition to test your ability to do just that.

All you have to do to enter is fill in the coupon below and then write on the envelope any whole, positive number. The prizes will be awarded to the people who send in the lowest numbers.

There is of course a catch and that is, if more than one person chooses the same number then they will be eliminated. For example, if a lot of you choose obvious numbers such as 1, 2 and 3, then all those people will be eliminated and someone who entered 143 may win. If everybody duplicates their numbers then the two highest numbers will win.

Computer Gamer (PBM) Competition, No.1 Golden Square, London W1R 3AB.

My number is..................................
(Repeat on envelope)

Name ....

Address ....

....

Age .... Tel ....

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Dragontorc is the sequel to Hewson Consultant's Avalon and is an excellent arcade adventure. Its superb collection of spells and locations while adding appeal to the game gives you unlimited opportunities to get totally lost. The following is a blow by blow account, of how to start the game and then progress through it almost to its climax. Obviously reading all of this article in one go will spoil the game. Therefore we have inserted headings which show the important locations. Allowing you to read only the help that you need.

Starting Out

From the start take the Seal of Merlyn. This will open up the two stone slabs in Wispwood if it is moved over them. Under one is a missile spell, the other opens the way into the Vaults of Locris.

The Vaults of Locris

Move over this and you will be in the vault. To leave, you must collect the three runes X, I and T and move them over the flashing E in one room so as to spell EXIT. This will make a rotating cube which, when moved over, teleports Maroc to Weirdhenge. The point to the **Vaults of Locris** is to find the Leyrod (as well as a crown but that cannot be done yet).

Find three rooms which follow into each other and each contains one chest. The first chest (not the one in the middle, one of the other two) can be opened by moving the servant over it and inside is a key. Take this, but watch out because

a spider appears as soon as the chest is opened. Move to the other chest (not the one in the middle) and this key opens it. Inside is another key. Take this but watch out for the spider! This key opens the middle chest. Take the leyrod but watch out for the spiders!!

The runes are hidden. One is in a skeleton which lies in a room, one is in a "treasure trove" and the other is in a chest. This has been disguised as a stool but should you move the servant over it, it will become a chest. This is opened by the key which opened the Leyrod chest.

Wierdhenge

Once out of the vaults you will be in Weirdhenge. Cast the leyrod spell and a cursor will appear. If you move this around the stones you should uncover two rotating cubes. One to the left, one to the right. These are entrances to the leylines which connect each stone circle. The left one takes you to Stoneways the other to Dragonsteeth. Take the left one. Once safely through the leyline you should be in Stoneways.

Stoneways

MAKE SURE THAT YOU STILL HAVE THE SEAL OF MERLYN. Cast the leyrod again and you should uncover three cubes. Take the one on the left and you will be taken to Webwood. This is the location of Merlyns cave.

Merlyns Cave

Find the stoneslab and then move the seal over it. It should uncover a trap door. Move over this and you will be in the cave. In the next room, take the door to the right. Take the WARRIOR spell and the dish of milk. Move the servant over the table and it will become a cube. Move over it and you will be back in Webwood.

Webwood

Seek out a stone, using a stick move the stone and you will find an axe. Take this, now go to a log and move the milk over it. A hedgehog will come running out. Leave the milk and take it. Now go to a tree

stump and hit it with the axe. It will fall down. Now move the hedgehog spike around the stump and a key will appear. It opens the door to the left. Inside is Halgor's seal. You may drop everything and take this seal. Leave the cave and go to the **Seven Sisters**. Use Leyrod and a cube will appear. This takes you to **Wyrmcrag**. Do not leave the circle. Cast leyrod to the right and a cube will appear. This takes you to the **Trollstones**. Cast leyrod and you will find two cubes. The right one takes you to the seven sisters but take the left one to **Weirdhenge**. From here take the right leyline to **Dragonsteeth**.

Wolfwood

In Wolfwood there are many dangerous werewolves. Use the warrior spell to kill them. Then find a stone slab and move Halgor's seal over it. Go down the hole to the sanctuary of Halgor. In the next room are three spiders. Hit them each with the seal and they will become spells. One of these is RETURN. Cast this and you will appear by a **tomb** in the **sanctuary**. Take a key from this tomb and using it, leave the room. Open the next door with it and you will see an anvil. Now leave the sanctuary via the stone slab in the first room. Go the **dragonsteeth** and cast leyrod. Two cubes will appear. Take the one on the right and you will be in **dreamdowns**.

Dreamdowns

Find a bow and give it to the elf. He will give you a nut. Get a squirrel and make him hit the nut. A key will fall out. Enter the **ruins of the Canlii** and find a chest. Open it with the key and you will find a magic symbol. Now find a stone slab (still in the ruins) and move the symbol over it. A hole will appear. Inside is the very important DEMON spell. Do not cast it yet. Leave the ruins and find a bush (not the one left of the dreamdowns). Move the squirrel over this and a torch will be revealed. Take this to the fire and light it. Go to **dreamdowns** and take the left path. You will see

THE LIVING ADVENTURE MOVIE

DRAGONTORC
THE LOST REALMS
of the

With SENSORY ANIMATION

HEWSON CONSULTANTS

Eamon McGing helps players stuck in Hewson Consultants Dragontorc with his guide to ancient Britain.

another bush. Push the squirrel over it and a slab and scroll will appear. The scroll is a clue. Move the magic symbol over the slab and a trap door will appear. Go down it. Go through the door and you will see a magic symbol on the wall. Snakes keep coming out of it. Kill the snakes with the torch then put the torch over the symbol and it will vanish. Open the door by using your symbol. Kill the snakes in the next room and then go through the top door. Take the missile spell and open the other door using the symbol. In the next room is a chest. Open it using the symbol but watch out for the snake. Inside is a different symbol. Leave the room using the original symbol. In the next room, use the same symbol to open the door on the left. Watch out for the axes and bolts. I find the slow spell useful here! Go through the door and then through another. Here it is dark, but that's no problem. In the middle of the room is a tomb. Using the new symbol, move it over the tomb. Out comes a dragontorc crown and a clue scroll. Take the crown and then, put the original symbol over its immobile copy in the room and a cube will appear. This takes you out. Go to dreamdowns and cast leyrod, you will find one cube which takes you to rollstones. From there go to **Wierdhenge** and then to **Dragonteeth**. Leave the crown by the anvil and leave. Now journey to **Trollstones.**

Trollstones

Kill the devils using warrior. In a stump you will find a coin. In a bush you will find a bone spell. And nearby you will also find a dove. Find a pool and move the coin over it. Now you can enter hellsmouth caverns. Move over the pool. Find an axe. Around the place are three eggs. Two contain snakes but in one is a key. Use the axe to smash the eggs open. Open a chest with the key. Inside is a magic symbol and an unseen spell. Take the magic symbol and move it over a flashing slab. This opens the exit but do not leave yet. Go to a room with an immovable key and put the symbol on it. It can be taken now. Use this to open a door. Inside is a demon

face. Now cast the DEMON spell. Another face will appear. When they clash, the former face vanishes and leaves another dragontorc crown. Take this back to the **sanctuary of Halgor** and leave it by the anvil. Return to the **vaults of locris** and take (if you have not already done so) the half moon which says 'the vault key lies in sanctuary go to **stoneways.**

Witchwoods

In **witchwoods** find an elf. He owns another halfmoon. Either give him a bow or jewel or kill him using warrior. Now moving your half moon over his and it will become a full moon. Now find a herb, a bat (you can pick this one up) and a frog (who is in a pond). Take all three to a cauldron and put them in it. A wand will appear. Find a stone slab and put the wand on it. You will find an UNSEEN spell and a jewel. In another slab you will find a light spell. Find a sword which moves on its own. Hit it with the wand and it stops. It is now the sword of antimagic. Take it to an immovable stick and hit it. Now you can take the broom. Find a green bush and push it aside with the broom to reveal a large stone. Move the fullmoon over it and it turns into a cube. Enter the leyline to the Druid's last sanctuary.

Druids last Sanctuary

Kill the goblins. One owns a key. One owns sunkey which opens the vault of locris. Find the dark tomb and cast light. In the tomb is a WALL spell. Find the locate spell. There is a hall with many opening with no doors. In some are spiders. Hit these with the sword and they become spells. In another is a wand. Do the same then go to the tomb and wave the wand around the walls. A key will appear. Open a door with this and inside is a chest. Open this with the goblin's key. Inside is another key. Open another locked door with this. Inside are two doors. One holds nothing it seems but cast locate and you will find a chest. Open this with the goblin key. Inside is the key to the cursed crypt. In the other door is a moon. Put your moon over this

and it turns into a sunkey. Put the sunkey over this and it becomes a cube. Travel down this to **witchwoods.** DO NOT LEAVE THE ORIGINAL WAND OR SUNKEY HERE. Go to the **vaults of locris** and open the locked door using sunkey. Take UNDO spell from the tomb then pass the next room into the long hall. There is an open way at the end. Don't go through yet. Cast UNDO at the door and a moon will appear, now go through. You will see the crown. Cast UNDO on the crown and it will fall down. Take this back to the sanctuary of Halgor and strike it to the anvil. It will be unmade, do the same with the other two crowns. Now go to **Torhenge** via **Dragonsteeth.**

Torhenge

Find a rabbit and then two holes side by side. Put the rabbit over the one on the left. A key will appear. Take this then open the chest. You will find a magic symbol. Take this to a red sculpture/Funny shape (I don't know that it's supposed to be) and hit it with

a rabbit. A slab will appear. Put the symbol on this. Now enter the cursed crypt. Put your symbol on its twin and you will receive another. Put this on its twin and you will receive a new symbol. Put this on its twin and you have the cube to leave when you are ready. Take this to the tomb and place it on it. The final crown will come out, also a hand. Take this crown to the anvil and destroy it. Now all four crowns are gone, get the crystal of antithought from a pool in woolfwood and strike it to the anvil. Now take the stone to the hand and tame it. This can kill Morag.

All that remains is to find her, kill her, get her crown and free Merlyn.

This is quite as easy as it sound but then again we want to leave you some challenge.

Eamong McGing was presented with a plaque by Andrew Hewson, Managing Director of Hewson Consultants, for being the first to complete the game.

ADVENTURE HELPLINE

Marion Champion continues her help for ailing adventures and includes an indepth look at Games Workshop's Runestone.

Feeling Adventurous?

Hi, this month features a special review of a new adventure game from Games Workshop. It is called "The Runestone" and is full of many original concepts. Also some more answers to your problems. Anyway, I suggest that if you haven't already heard of "The Runestone" that you read on at once.

The Runestone

This adventure really seems to be a game and a half. Just reading the instructions left me in awe of this new adventure. You can, it would seem, go on playing forever until you finally attain the aim of the game. And when you do reach your goal you may be nowhere near that golden score of 100%.

"The Runestone" has over two thousand locations and is without question the largest adventure game that I have come across yet. Two thousand locations makes the game seem almost frightening since it gives such a wide area to cover. Everyone of these locations is graphically shown every time you visit it. The screen is permanently divided into two sections. The top half is devoted entirely to the picture and the bottom to the description of what is happening.

The normal set up of any adventure, whether graphical or otherwise is that you play the central character or the hero of the story and you have one aim to achieve. Once this is attained the game is over. In Runestone there are three leading characters and you play every one of them.

'All of them!' I hear you gasp. Yes but not all at once. You can be whichever of those you wish to be at any one time, bearing in mind that the three characters may be separated and in locations miles away from each other.

The three characters are:-
MORVAL THE WARRIOR.
ELIADOR THE ELF.
and GREYMAREL THE WIZARD.

Each of these characters has a different skill which you must discover and use appropriately. This is not too difficult to discover if you combine their titles with what you can find at their respective abodes and make an intelligent guess.

The main quest in this adventure is to destroy an evil character known as 'KORDOMIR THE DARK'. The game takes place in the land of Belorn. In the North lie the Northern wastes which are inhospitable and wild, so few of the inhabitants of Belorn will venture far north. Many generations ago, the happy land of Belorn was invaded by the evil Kordomir and his Orcs. The ancient treasures of Belorn were stolen and taken away to the North. Many great wizards and elves were slain. The raids continued and the land of Belorn became closer to succumbing to the reign of Kordomir the Dark. But there is still hope, for our three heroes set out to end the destruction in a final bid to eliminate Kordomir forever.

There are several ways that you can play this game. One is to start off with the ultimate aim of conquering Kordomir and retrieving as many of the lost treasures as you can, or alternatively you may just wish to explore the countryside and meet the various inhabitants of which there are about forty. This is perhaps a good way to begin so that you can get an idea of how the game is set out and what you are likely to find on your travels.

Once I had begun to play this ambitious adventure I soon abandoned my usual mapping technique to resort to something a little less reliable, my sense of direction. I realised that with over two thousand locations my piece of paper was simply not going to be big enough, no matter how small I made my writing, and with many locations having no specific landmarks or name to relate to, it all got too confusing and I managed to get lost several times.

The game only permits you to move north, south, east and west, so if you wish to move northwest you must go west then north or vice versa. A map is provided (as shown here) which shows the general positioning of major points, and due to the unusual nature of this particular adventure, the map is extemely useful.

That last comment refers to the use of screen shots for finding out where you are going. You can look in any one of four directions at any one time, (north, south, east, or west) without actually having to move in that direction. This gives you a view from the point which you are standing to as far as you can see (or as far as the computer allows you to see.) In other words you cannot see the location you are in, only the locations around you. The text will inform you of where you are. The view into the distance will show you any buildings or mountains or lakes or anything that is within your range of vision, in perspective of course. You will soon learn to recognise the shape of distant blobs

even though they have no detail at a distance. You will therefore be able to head for a certain point and watch it get nearer gradually. This feature in conjunction with the map will enable you to pinpoint your location fairly accurately although there are buildings and landmarks not shown on the map which you will have to discover for yourself.

The best way to catalogue your progress is to photocopy the map and put a numbered key on it so that you will know which buildings are what and the items that you can find within them. Drawing an intricate map of every location is in my opinion extremely difficult and time consuming and can considerably ruin some of the fun of this game.

One more note about the screen shots. As you enter each location, the picture will clear and the new view will start to appear. The view builds itself up from the back to the front and hence some objects or landmarks at the back will be obscured by trees or mountains or whatever is at the front of the picture. It is a good idea therefore to watch as the picture is being built up. You might see something that you would not otherwise have seen in the final view.

As I said before, you control all the characters and you can choose which one to be at any one time. If you are lucky and you do manage to keep all three characters together then you can ask the others to do things for you as the character you are already playing. You do not have to keep changing from one to the other. It is a good idea to remember that every time your chosen character makes a move or takes a turn, the other two characters also take a turn. If they are not with you then who knows what they are getting into, but if you notice that your score has suddenly diminished, you would do well to assume that one or other of them has got into some scrape or other, the most likely one being that one or both has been captured by orcs and you will either have to rescue them as the free character or become one of them and escape. The choice is yours. If you change to one of the other characters and find yourself in a fortified tower with a couple of orcs then you have been captured. All prisoners are taken to the same tower but which one is what you have to find out. The characters in the game which you do not control, ie those other than the main three, all have minds and aims of their own too.

Although they may come along with you as friends to help you out they may unexpectedly wander off to do their own thing from time to time so don't trust them with anything important.

The game is run in real time so if you don't move fairly fast then the words 'Time Passes' appear and the various characters around you will begin to go about their business without you. The way to avoid this is to start a sentence then think about what you wish to do next and after that action. You must always plan ahead.

Since the game is rather large, once loaded it goes straight into the actual game, there is no "Do you wish to play again" option just as there is no quit option since there is not sufficient memory to allow for this. If you feel you are likely to want to start again then save the program at the start using load when you wish to recommence. This is much quicker than reloading the whole tape. None of the three characters will die during the game although they may become extremely weak at times. In this way it is impossible for the game to end due to your death. The only way it will end is if you succeed in the ultimate quest, or pull the plug out.

The instructions do not state the exact extent of "The Runestones" vocabulary, but it would seem that it is very wide. Minor mistakes in sentences do not seem to affect the computers understanding of the sentence although if you elaborate too much on description of an object it tends to misinterpret by taking the wrong word as the object.

You can talk to other characters and tell them what to do and also you can input quite complex sentences.

An excellent feature of the game vocabulary is its variety of possibilities regarding looking and moving commands. If you simply state a direction then your character will look to the view in that direction. If you tell it to move then it will move in the direction it is facing, giving you the view in that direction from your new location. To save time you can move several locations at once in any one direction, following the instructions given with the game. You will see the view at each of these locations as you pass through.

One final point on commands, CAPS SHIFT and 0 will delete the last character entered, CAPS SHIFT and 1 will delete the whole line, CAPS SHIFT and 2 will rewrite the previous line if required, a most useful addition.

I was extremely impressed with "The Runestone" from Games Workshop. It is available for the Spectrum 48K at £7.95 retail price which is excellent value for this amazing game. It is also available on order on microdrive cartridge. An entirely new concept in adverturing with it's combination of real time combat and action, full text interpreter, multiple command input and what seems to be a never ending supply of new characters and locations. The Runestone is definately worth experiencing!

Letters

In your review of 'Heroes of Karn' you asked what a BARROWIGHT was. Well, having recently read Tolkien's Lord of The Rings, I can answer your question. While Frodo, the hero of this epic, was crossing the Barrowdowns he and his friends were captured by a BARROWIGHT. This gruesome creature was intent on robbing them of their worldly possesions and then eating them. But worry not! Luckily a mystic friend saved their skins, just in time.

I was wondering if, in the not too distant future, you would mind doing a review of "The Jewels of Babylon" by Intercepter Software. Having seen the ad for the game in your magazine I noticed how good the graphics seemed in the screen-shot. I would be deeply grateful if you would do this for me.
Yours hopefully,
Jonathan Todd
P.S. How's EECANN?

Greetings, O warrioress! My name is Karth Demonslayer. I have a tale to tell of great sorrow and sadness which will surely lift the heart of every true adventurer. It follows:
"Once upon a time, when the land of Darkness still existed, and the Heroes of Karn were living peacefully, a new breathtaking parchment appeared in certain Alchemists stores (namely W.H.Smiths). Its name was Personal Computer Games.

'On hearing the news via a pesky dwarf, I set off at once to find the sacred parchment. Three moons later I reached the end of my quest and there on a shelf lay the parchment. I promptly paid the shopkeeper my last few gold pieces and set off home.

'Natually, I was enthralled by the parchment and every month I trudged the three day journey to ensure my copy. During this time I made the acquaintance of "The White Wizard". He ran the adventure section and I wrote to him as much as possible in the next few months (see Feb. 1985 adventure letter section) Then disaster struck. A scruffy orc arrived at my deluxe cave apartment with a message: PC Games had gone bust! I went into wild fury and subsequently hacked off the orcs head with my Wilkinson Sword.

'I wandered in despair for 2 whole months. I tried to subscribe to Micro Adventurer but another foolish orc informed me that they too had closed down. This orc was a little thicker than most and my Wilkinson Sword broke on his skull.

'Then, while making a routine visit to my Alchemists store, I spotted a faint glimmer of light between the other parchments. I brushed away the cobwebs and wiped off the Goblins blood and withdrew the parchment. It's name? Computer Gamer.

"By the Zits of Zork!" I cried, "This is the greatest thing since MA and PCG!" I flicked through and found 122 pages packed with reviews, competitions, software companys, personalities, and above all, adventures.

How long can this continue? Will Marion be as good as The White Wizard? Will there be lots of beeb games reviewed? Don't miss the next exciting letter from Karth Demonslayer!"
Karth Demonslayer
P.S. Happy Hacking!

I've just read your colourful magazine and find it very interesting and helpful.

Your magazine is very different with your layout of the pages and a change from ordinary pages with reviews in a neat line and columns.

I was particularly interested in your adventure pages, as I'm a great adventurous follower. I noticed in your reviews that you didn't include Doomdarks Revenge. This epic from Beyond is one of the great games I've played and there have been plenty of those. Great graphics and the novel short-listed menu intake makes this one of the best.

The selection of numerous players make it very good value for money and a must for any person owning a computer.

The cute graphical features of both Luxor, the Moonprince, and further into the game, Shareth the Heartstealer, are absolutely brilliant, so much, that my Spectrum blew it's 48K and is now in for repairs. Well done Beyond and thankyou (although I'm tempted to send them the bill).

Eecaan, please bring me more of your computer gaming, and as for me I'm going out to buy Beyond's Shadowfire.
Yours thankfully,
Philip Oself (16)

I'm writing to thank you for your advice regarding my early problems with Hero's of Karn.

Thanks to your help I've managed to get past the barrowight and the bear, taking everything in sight with me. I was just getting into the game when my brain again stopped functioning. This time it is the pirate and the serpent who are stopping me travelling, so as I've no-one else to turn to, could you please help me again. (One day I'll get the hang of this adventure business).

I am very much looking forward to the next issue of "Computer Gamer" as its the only magazine which really helps you decide what sort of game to buy. Anyway I look forward to hearing your reply.
Yours faithfully,
J. Smith
W. Yorkshire

To get rid of the serpent you need to have in your possession the songbird from the bird chamber. To get the songbird type, "BEREN, GET THE SONGBIRD." Then return to the debris room where the serpent is and type, "BEREN, KILL THE SERPENT WITH THE BIRD." As for the pirate, well he doesn't come into the game until much later on so I wouldn't worry too much about him for the time being. But if you are worried then I will say that the way to get rid of him eventually is to get one of your rescued friends to do the dirty work for you with a handy weapon. The next step is to rescue Istar but I'm sure that you can work that one out for yourself if you remember my hints on using every item that you are carrying in every possible way that you can think of.

ADVENTURE

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THE DOMAIN OF KORDOMIR THE DARK

THE BLESTED LANDS

BAY OF TOWERS

THE GREAT WATERS

TOWER OF BARINIR

TOWER OF BRYNOR

FORTRESS OF LORDVIL

LAKE BELORN

N

BELORN AND THE NORTHERN WASTES

Dungeon Dressing

Our Dungeon decorator, Gordon Hamlett, helps you brighten up your adventures.

Last month I talked about leaving ideas out of your storyline because they did not fit into the general scheme of things. This month, I want to look at how to fill in the rest of the plot.

When I first started writing storylines, I had a main theme and a few specific ideas that I wanted to include. Having put them onto my map, I filled in the surrounding areas with any half-baked idea that came to mind. Not surprisingly, the resulting story was totally disjointed. To get round this, I developed the following method. Having decided on a theme, I made a list of everything I could think of that was asociated with that theme. This helped in two ways. First, it put meat onto the skeleton storyline so that the whole thing flowed better and second, it showed up any scenarios that weren't quite right.

To give an example of this, I have taken the theme of pirates (not the software type!) and written down ideas off the top of my head in no specific order whatsoever.

— Eyepatch — talking parrot — Peg leg — Black spot — Treasure maps — Taverns — Wenches — Yard arm — Islands — Pirate ship — Cutless — Rum — Pieces of eight — Doubloons — Treasure chests — Scurvy — Flintlock pistols — Mutiny — Marooning — Skeletons — Jolly Roger — Hand to hand fighting — Cannons and broadsides — Caves — Smuggling — Ragged clothes — Prepare to repel boarders — Yo Ho Ho — Sea monsters — Rations — Avast behind — 15 men on a dead man's chest — Cat o'nine tails — Keelhauling — Walking the plank — Land ho — Crows nest — Telescopes — Shiver me timbers — Clap him in irons — Captain Flint — Long John Silver — Jolly Roger — Skull and crossbones

As you can see, the above is a mixture of locations, objects, characters and pirates' slang. Not all the ideas would be used, but there is enough material there to develop a decent story without having to resort to dinosaurs, robots or the like.

Reading Material

Two books worthy of mention this month, one serious, one not very serious at all.

Guide to Adventure Games by Gary McGath published by Compute! is an American book covering the history of adventure games, how to play them, how to write them and which are the best games to buy. A lot of the information contained in the book can be found elsewhere — especially to readers of this column! but the examples chosen are orginal and intelligent and there are a few nuggets of information to be gleaned. The section on writing programs is done in pseudocode rather than the flowchart that the British seem to favour. The example program is best used as an illustration of how to write a program rather than as a game to play. The final chapter on how adventure games are likely to develop over the next few years, I found very stimulating but overall, I thought the book was too "American" and at £10.95, somewhat overpriced. For the dedicated fan only.

Much more fun are the Xanth books by Piers Anthony published by Futura. Xanth is a land where absolutely everything is magical. There magical talents range from the useless (like being able to project a purple spot onto the wall) to the powerful (talking to inanimate objects) and the stories are based on the interplay between these talents as the characters attempt to fulfill various quests. The books are full of awful puns (nickelpedes are five times worse than centipedes) and are worth reading several times as you are bound to miss loads of them. There are currently eight books in the series (although more are planned) starting with A Spell for Chameleon, The Source of Magic and Castle Roogna. Piers Anthony has one of the most fertile imaginations I have come across and his books are marvellous sources of inspiration for anyone planning to write an adventure. Even if you are not, go out and read them anyway. I cannot recommend them highly enough.

Fascinating Features — Sources of Water

This includes wells, fountains, springs and pools and can be neatly divided into two sections — the constructions themselves and the liquid contained therein.

There is nothing so sure that someone coming across a well in the middle of an adventure is going to assume that it is a wishing well and lob some treasure down it in hope of greater reward. This gives you a chance for a few variations on a theme. You might just want to relieve them of their ill gotton gains or there might be some useful treasure stuck in the ooze at the bottom cast there by a previous adventurer. Maybe there is no water at the bottom, but a passage leading to other areas. Perhaps it is a special area that can be developed — the well of lost souls or similar. (GH's memory of wells is none too good. When I was running a D+D game at University, I had a well that was all but marked Ye Olde Wishing Welle. So what did GH do? He tied up the hobbit and lowered him down the well. I ask you — Ed)

Fountains can be considered similar to statues (see issue two for details).

The liquid within these structures is much more interesting. Apart from the obvious water (to drink or water plants with) you can use it as all sorts of potions. Healing wounds perhaps or increasing strength). Giving swords and armour magical ability — or rusting them. Holy water for fighting the undead or acid needed to dissolve something. A love spring that, when drunk from, causes you to fall hopelessly in love with the first creature of the opposite sex you meet, regardless of species (this explains how creatures such as centaurs and harpies came into being — read the Xanth books!) A fountain in the shape of a satyr asks you a riddle when you enter a chamber. If you get it correct, it recites a clue to a treasure. Get it wrong and it sprays you with something nasty. A pool that transmutes silver to gold or copper on a random basis.

You should have no trouble coming up with original ideas involving your liquids. Remember, some liquids must be drunk (strength potion) whilst others must be bathed in (cure wounds). Also, don't make everything beneficial to the adventurer. Keep him on his toes with a judicious one of poison etc.

Next Month

From next month, we're expanding Dungeon Dressing, to include a supplement for Science Fiction gamers. So Gamers who prefer droids to dwarves and phasers to swords should lookout for Starship Scenary. Starting in the next transmission of Computer Gamer.

cupt ird with a
of water that will tip
unless you stand
the way when you

tempt to find a document on the future of Computer Games hidden in the study of a fellow supreme Gamer

dow showing the suspects sitting in the scene if the crime with a cursor that can be moved over objects

short package holiday only to land in trouble. His ship has landed on the top of a ketchup bottle in a cafe

The prize — an Enterprise 64

RESULTS

jointed. To get round this, I developed the following method. Having decided on ... I made a list of...

serious, one not very serious at all.

Guide to Adventure ...

Castle Roogna. Piers Anthony has one of the most fertile imaginations I have come across and his books...

that, when drunk causes you to fall ho... ly in love with the creature of the oppos...

Did you win a prize in our competition to design a one location adventure? Find out as we present the winners.

The first Transmission of Computer Gamer set the interesting problem of designing an adventure game that would be played within one location. As an incentive an Enterprise 64 was offered as a prize.

Soon the Gamer offices were flooded in entries in which players fought wizards, snakes, demons and even school girls brandishing hockey sticks. During these exploits the players took on the guises of brave heros, husbands held to ransom (by their wives), the Editor of Computer Gamer, and even the soul of a person wrongly sent to hell who then had to lie and kill his way to heaven!

Eventually a shortlist was selected and a winner chosen. He is Tim Branch a 14 year old schoolboy from Reading who is now the proud owner of an Enterprise 64.

The winner — April Fool by Tim Branch. The games screen display.

His winning adventure was set in a classroom (hopefully not his own), it is 9am on April 1st. You play the poor Teacher who has to survive till noon, the traditional end of April Fool's Day, without having a nervous breakdown.

Your stress level is measured by a bar on the screen display which increases whenever you are caught by or 'fall for' an April fool prank.

It is possible to lower your stress level by getting things done, such as taking the register or collecting in homework. The first diagram shows an example of the screen layout including separate text, graphics and command windows along with a timetable that should be worked through if you are to survive the morning.

Also displayed are the stress bar, the time and the number of detention slips that you have left. Unfortunately you can't leave the room to get any more or the kids will jump at the chance to set up some more practical jokes.

The second diagram shows the layout of the classroom along with some of the jokes. These include chalk on your chair which you can avoid by examining chair or your stress level will rise. Other pranks include a vaseline covered blackboard, a mousetrap in your drawer and a booby-trapped cupboard with a bucket of water that will tip on you unless you stand out of the way when you open it.

The runners-up in the competition were Mr. D. A.

The plan of the classroom in April Fool.

Smith from Droitwich, Worcester, Robert Blacknell from Essex, Chris Moore from Dartmouth and Sam Ayres from Northampton. Mr Smith chose a railway carriage for the setting of his adventure in which you played a British agent who had to retrieve a codebook from Soviet spys onboard a train to Holyhead.

In Tragon's Study by Robert Blacknell you played Eecaan in his attempt to find a document on the future of Computer Games hidden in the study of a fellow supreme Gamer. Throughout the adventure you are aided by a droid called Cluebot whose help

you certainly need as the puzzles were set by someone with an IQ of over 900.

Murder most foul is the subject of Chris Moore's 'Murder at the Manor' where you play Inspector who must solve a classic murder mystery.

The judges were particularly impressed with the way Chris would implement the game on the computer's screen. The display contains a graphics window showing the suspects sitting in the scene if the crime with a cursor that can be moved over objects that you wish to examine or take etc. These command options are selected from a Macintosh style pull down menu and effect whatever is under the cursor. For example if you wanted to accuse someone then you move the cursor over that character then select AC-CUSE from the command bar. The screen is completed by a text screen and a zoom/examine screen which displays closeups of any objects examined.

The final winner is a complete contrast and was sent in by 12 year old Sam Ayres. It tells the story of a Splodget who has travelled to Earth from Cuboid on a short package holiday only to land in trouble. His ship has landed on the top of a ketchup bottle in a cafe north of Watford Gap. To complete the adventure he must retrieve a screw to mend is craft while navigating dangers such as a spider and a truck driver who will soon reach for the sauce bottle destroying the Splodget's ship.

Congratulations to the winners and better luck next time to all the other entrants. Keep watching these pages for more exciting competitions to win fantastic prizes.

Robert Blacknell's Tragon's Study.

TRAGON'S STUDY

A Splodget on a sauce bottle by Sam Ayres.

51

"R"E"V"

Here is a guide to the symbols used to illustrate the game reviews.

I think you could justifiably criticise Hill MacGibbon for the blurb they put on the cover of this software and book combination. They say that the cassette includes four arcade games (which are on side one of the tape) as well as an arcade adventure game (on side two). But, when you load side one of the tape, there is only one program on there, not four. So what you are really getting is a single game with four screens. I suppose I'm being a bit picky, but on the other hand, I don't think anyone would describe JSW as being sixty separate games just because it has more than sixty screens, so I do think that Hill MacGibbon are being misleading by describing side one of the tape as four separate games.

I wouldn't mind so much, but these four 'games' are all very primitive, being just one step above space invaders. Each game is based upon a character from the book (Mike Teavee, Augustus Gloop and co.), and apart from the Augustus Gloop screen, they are all standard collect-the-object-avoid-the-monster games, with small, flickery graphics.

You are supposed to finish all four of these, and collect a code which will allow you to enter the 'Incredible 43 room Arcade Adventure', but frankly I found them all so boring and unaddictive that I gave up and played the game on side two by using the cheat mode. This cheat mode is a good idea, giving you infinite lives, but not allowing you to finish the game completely. If only the game itself were as good. Unfortunately, it's just the usual platform and ladders formula — again with fairly poor graphics. It's not a bad platform game actually, and with better graphics would probably make a good budget game, but for £9.95 it's lousy value, even with the book and the four screen on side one, thrown in.

What's more, I thought that the term 'adventure' implied that a game involves some manipluation of objects as well as just good timing and reflexes (which are arcade skills), in which case calling the game an arcade-adventure is also a bit misleading. I suspect that Hill MacGibbon's marketing men have picked up a bit if software jargon and gone overboard using it in their claims for this package.

I don't want to be totally negative about this package (honest!), and I do think that attracting children to books via computer games is a good idea, but it has to be done properly (the way that Melbourne House did the Hobbit, for instance), and frankly, the software in this package just doesn't do justice to the book.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
White Dwarf

NEWS

Chicken Chase

Title:	Chicken Chase
Computer:	Commodore 64
Supplier:	Firebird
Price:	£2.50

Pardon my Franglais mais Sacre Blue! C'est une piece de French software avec un touch of ooh-la-la. Je ne think pas je can cope.

L'action takes place dans la henhouse ou nous find le cockerel avec l'amour on his mind. L'inner sanctum avec une heart sur la porte est where le real fun et games takes place. C'est where Madame Hen waits for le Monsieur's attention. Ce part de la game est 'idden from view, et quite droite too!

Apres la visite du Monsieur, la hen emerges et climbs sur les platforms to lay un oeuf from which un oeufspring will be 'atched.

Aux meantime, les various creatures entre dans le henhouse intente on eating les oeufs. C'est le job de la cockerel to chase les interlopers away — un sorte de chicken chasseur.

If le cockerel ne defends pas l'oeuf avec success then la hen frappes him sur la tete avec un rolling pin.

When vous n'est chasing les beasts, vous must mange corn et l'odd worm qui crops up to maintain votre strength. Vous must also pay l'occasional visite to la place d'amour for to make more oeufs. If vous ne them make pas et l'oeuf 'atches, then le chick marche to la porte and rings la bell. Then la hen will make avec l'aggro about la tete again.

Anyone qui thinks that un cockerel's list est tres comfy has un autre think coming. L'arrival des creatures (hedgehogs, rats, stoats et les tres fast snakes) est tres frequent et vous will 'ave votre job Cut out to keep les oeufs safe.

Les graphiques est un peu blocky et not quite what nous are accostomed to mais le game n'est pas le demi bad though l'appeal may wane.

JG

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
White Dwarf

Frankenstein 2000

Title:	Frankenstein 2000
Computer:	Spectrum 48K
Supplier:	Icon
Price:	£7.95

Frankenstein 2000 is a mildly enjoyable dodge/zap/collect game, set inside the body of the Frankenstein monster. Riding inside your miniaturised submarine you visit various parts of his body in order to reactivate the slumbering hulk.

Each location presents a fairly familiar task — for instance, when you are in the trachea you must avoid hordes of frogs travelling up the screen (trachea = throat, frogs in throat, gettit? Actually, it took me a while to get that joke.)

In other locations you must avoid objects such as cigarette packets and Carbon Dioxide sprays in the lungs, and certain greasy objects in the stomach.

The graphics are ok, but not particularly wonderful, a verdict which I feel applies to the game as a whole. I found that each screen presented a small challenge, but that after a couple of tries they all became fairly routine.

One aspect of the game's design that became a bit boring was that the sequence of locations is fixed. You can't visit them in any order, as you could in, say, JSW, so after a few games I became thoroughly bored with having to navigate the same locations over and over again. After spending a while getting a fair way into the game, I just couldn't be bothered to keep on going back to the start just so that I could work my way back to where I had got to in the previous game.

Apart from that one criticism of the game's design, I can't honestly say that I have a particularly strong opinion about the game one way or the other. It's just rather undistinguished, neither very good nor very bad.

C.J.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
White Drawf

Ultimate have a name for producing games of very high quality and great originality. Entombed should have been another one of these, it has all the right ingedients but somehow they don't add up to a good game.

The story goes that you, Sir Arthur Pendragon have discovered the Eye of Osiris, an ancient Egyption magical relic. However whilst in the process of exploring the Temple you have become trapped and you must now find your way out. To aid you in this quest there are two objects to be found, a magical whip (shades of Indiana Jones) and an electric torch. The whip can be used to dispose of the mummies, cats, bees and flies that constantly assail you whilst you wander around the corridors. The torch is used to illuminate parts of dark rooms other torches cannot reach!

The whip makes a great crack sound when used and another good feature is that the torch beam must be directed around the room like a searchlight.

Just to confuse the issue are the Crows that fly around from time to time that sometimes carry Ankh symbols with them. If you know that Osiris, the Egyption god was part crow and also that an Ankh is the symbol of life then you will work out that by jumping up and touching the crows you gain extra life. If however you are ignorant of these facts then you are stuck!

Life is not arranged in the standard way of having a fixed number of lives and each time you die returning to the beginning. Rather it is arrang-

The Rocky Horror show was a peculiar musical and film, now its a very odd game.

In it you play either Brad or Janet, as you try and rescue the other from the clutches of the evil Dr Frank,n,Furter whose medusa machine has turned your partner to stone.

Unfortunately, the De-medusa machine, has been dismantled and scattered throughout some rather strange rooms. Your task is therefore to assemble the pieces, free your loved one and escape the mad Doctors castle.

However you will have to cope with the castles strange inhibitants as you pursue your quest. These include Riff-Raff a manic depressive butler, Magenta the maid, Columbia a groupie, Rocky Horror — one of Frankie's creations and Eddie.

Eddie is a failed experiment who is kept frozen in the freezer. Unfortunately he frequently thaws out when he charges round the castle on a motorbike. If your in the way and he

Richard O'Brien's
THE ROCKY HORROR SHOW

But it's the pelvic thrust...

ENTER AT YOUR OWN RISK

54

ed that you have a life force that is diminished each time a nasty collides with you. This force can be supplimented by fooling with the crows as I said but you still die pretty quickly if caught in a blind alley without the whip.

After a spot of aimless wandering you will usually stumble upon a doorway, through which the magical whip lies. Obtaining the whip is not easy though because

as you enter a large number of rolling balls are released which you must dodge.

The graphics are what you would expect from Ultimate, that is, excellent and the sound isn't bad either. With all this said I must return to my opening statement and say that I found this game very, very boring indeed especially in the early (pre whip) stages when the game consists of wandering

though passages being slowly smegged!

J.D.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Nebula

runs you down, you lose your only life. Consequently, at least a part of your strategy should be to keep returning to the freezer to reactivate it to keep Eddie under control. Although Eddie and Riff-Raff can kill you (with a raygun) the real pain is Columbia. She mistakes you for her idol Eddie and tears your clothes off. This leaves you helpless until you manage to find them again, where she's lying in wait again.

The graphics of the games rooms are excellent and there's surprisingly little difference between the two versions except of course the Spectrum lacks the 64's excellent music.

My only criticism is that the animation of the characters is a little stiff but that doesn't alter the fact that it is a very odd and even sick game — but great fun to play.
T.H.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Bright Star

55

Quasimodo, that loveable hunchback with a passion for bells, is having another swinging time in the belfry. His problem this time is that the King's soldiers hold him responsible for the missing crown jewels. Although he didn't take them, he knows where they are and he can only prove his innocence by putting them back in their cases.

At first Quasimodo must fend off the soldiers scaling the walls by throwing rocks at them, all the time, taking care not to be caught in the hail of arrows.

Success at this stage allows Quasi to gain the first jewel and descend to return it to the jewel cases.

The next jewel is not so easy to reach and its recovery involves swinging from bell-rope to bell-rope on a long upward climb. All the time the bats, awakened by the bells, fly to and fro. If Quasi is hit by a bat he will fall to his death unless he is hanging onto a bell-rope.

Each rope has to be set swinging and jumped from, at a fairly precise point on its length, if the next rope is to be grasped. The animation, which is otherwise excellent, is a little disappointing when Quasi falls, but hopefully it will not be suffered too many times.

After the recovery of the jewel the climb down is just as torturous and there are more of those wretched wall-scaling soldiers to overcome, will they never learn?

The third jewel lies at the topmost point of the battlements. Windows open and close as soldiers take pot shots at Quasi and near the top, still more soldiers rain down boulders on his head.

So the game continues, the next jewel is not so difficult to recover but the bats are more numerous and the soldiers efforts to scale the wall become more energetic.

Another excellent addition to the US Gold label, I have a hunch that it will ring the bells on tills up and down the country.

JG

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Nova

Knight Lore' is one of those games which had achieved cult status on the Spectrum computer last year, when it was released by Ultimate.

Now with the revamped company is converting their older Spectrum listings onto the BBC Micros & Amstrad. Knight Lore is an excellent game, perhaps the best in its genre.

The story centres around an adventurer cursed with the terrible malady of Lycanthropism, that is turning into a Werewolf at night, and resuming his human characteristics in the day. In order to rid himself of this curse, he must first find the Wizard's room including Wizard pacing around the room and cauldron bubbling away, emitting eerie messages in the form of ingredients for the Werewolf cure. Your task is to find the various 'treasures' which make up his cure.

Unfortunately, there are tasks within the adventure, involving walking in and around, over and under some of the most surreal obstacles I have ever met in a computer game.

For instance, very early on in the game, you have to take a treasure, surrounded by spiky balls (looking like the old world war 2 sea mines), as soon as the treasure is taken (a maximum of three at any time), then the balls start descending, normally landing on you!

Other characters, intent on stopping you reach your quest are Ghosts, Statues (looking like Rats with fangs!) and bouncing balls. VERY stupid guards, on patrol duty, and animated cubes, all very weird!

Possibly the most annoying of all the characters, is a force field, which pushes you into the nearest spike/ball/opponent, and thus depletes one of your four lives. There are in total seven ingredients, and some dummy treasures, although these can be used to jump over obstacles.

As an adventurer, you can enter most rooms, including the Wizard's rooms and, the 'force field' room without being harmed. However as a Werewolf, you are immediately attacked by the force in the cauldron, and some of the spiky balls come down faster and the bouncing balls home in on you, but you do have the advantage of being able to jump much longer distances, so the spiked floors are less of a hazard.

In comparsion to the original version of the Spectrum, 'Knights Lore' is a well implemented game, it uses only two colours on the beeb and three on the Amstrad but the individual characters are well detailed, and move around smoothly.

The 'three dimensional graphics' are very good, giving an added feeling of space and room in the game, the bounderies of the castle in which you are exploring, are obviously ageing and falling apart, and the sound effects are good, if a little undemanding.

Knight Lore, is one of those games, which find the right balance, pulling together excellent graphics, a good story and a character; I must admit to being a Lycanthrophile (lover of Wolves) myself and the Werewolf is very good, especially when he goes 'flippo' between transformations!

A good game and highly recommended...

C.G., J.D.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Nova

56

Title:	Super Pipeline II
Computer:	Amstrad
Supplier:	Taskset
Price:	£8.90

PL1 LIVES 3 PIPE 3

Oh dear, what have Taskset done now? I remember Taskset as being a particularly refreshing software house that produced great and original software for the Commodore 64.

Super Pipeline for the C64 was great. Super Pipeline II for the C64 was also quite good, thought it was only a variation on Super Pipeline, however Super Pipeline II for the Amstrad is no where near Taskset's usual standards.

The game play remains similar to the Commodore version, but it is the graphics that let the whole thing down. The Amstrad has marginally inferior stationary graphics to the C64 and of course no sprites. To get the movement right you have to move around chunks of the stationary graphics screen to produce the right movement effect. On some Amstrad games this has been done very well indeed, but it is the Taskset moving graphics that let down Super Pipeline II.

The main problem is when the moving characters collide with the background — they disappear! This can be quite a problem as a lot of the action revolves around ducking in and out of the pipes to fix leaks and shoot nasties. This gets very difficult when you start to collide with nasties that you can't even see because you're behind the pipe.

This aside (though you can't really thrust it aside that easily) there is a lot less wrong with it than most games purely because the gameplay is so good. The idea behind the game is that you are Foreman Fred in charge of a workman keeping a set of water pipes in good shape. The water flows through the pipe and down into a set of barrels at the bottom of the screen.

All is not that simple though (is it ever?), various types of nasties are running around trying to kill you and are drilling holes in the pipes letting the water out. You must take your workman down to the hole and have him repair it. You are also armed with a sort of laser pistol that can eliminate most of the types of nasties.

Between screens you are treated to an 'interlude' of animated graphics which are really quite good — look out for the C5. Each screen has a different pattern to it, and the number of barrels gradually increase. The different patterns of pipes present a different tactical problem for the pipes' defence.

As I mentioned before the graphics leave something to be desired, but that may not deter some people as much as it did me. The game play is quite good. Usually it's a case of 'nice graphics, shame about the game' this time though it'a nice game shame about the graphics.

MR

PLANET RATINGS

Originality	
Graphics	
Use of machine	
Value for money	

STAR RATING
Bright Star

Title:	Chopper
Computer:	Commodore 64
Supplier:	Sparklers
Price:	£2.50

As a helicopter pilot your task is to destroy the enemy power plant. To do this you must complete three screens interspersed with refuelling screens.

On the first screen your chopper appears on the right of the screen. You must dodge up and down to avoid oncoming choppers, firing as they fire back. Occasionally, a jet plane or a large chopper flies across the screen.

After a time limit has expired you must guide your helicopter to refuel with a plane.

Next you are on the right of the screen facing oncoming balloons, airships and geese with no weapons to hand. You must dodge up and (yawn) down the screen to avoid collision.

After a (yawn) time limit you must refuel again.

The final screen is the power plant which has three locks hidden deep in the mountainside. By dodging the non-destructable, non-firing guardian choppers you can shoot out the locks and gain access to the power plant. That is assuming a third helicopter doesn't get you first.

Sounds uninspiring? It is, a Sparkler without sparkle. Chopper round for something else. (ZZZzzzz)

JG

RESERVE FUEL

PLANET RATINGS

Originality	
Graphics	
Use of machine	
Value for money	

STAR RATING
Black Hole

This started off quite well, but soon became a bit boring because it's one of those games where all the screens follow each other in a fixed sequence, so that in order to master each new screen, you have to go through all the earlier screens time and time again. And, though I enjoyed playing the first few screens I just got so fed up with constantly having to go through them just to try and see the next screen that it soon stopped being fun.

In some of the screens you have to collect letters in the correct order to spell the word 'Arabian', whilst on others it's just a matter of surviving as you row a boat, or fly on a magic carpet and try to avoid the nasties chucked at you.

Some of the things that you have to avoid, such as an eagle or some spirits, have fixed patterns of movement, so that avoiding them simply becomes a matter of committing those patterns to memory, which makes some of the screens

(such as the very first, Sinbad's Ship) a bit dull and repetitive once you've mastered them.

The graphics actually look a bit dated and some of the screens remind me of the old Imagine game, 'The Alchemist', though the sprites in 'Arabian Nights' look a bit smaller than in 'Alchemist'. I also think that the collision detection was a bit suspect on occasions, though mainly on the first screen, where I got killed a number of times by an eagle that looked like it was still a few pixels away.

Given an infinite lives POKE, so that you wouldn't keep having to go back to the beginning and retrace your steps, this would probably be quite an enjoyable game, but as it is, that constant trek through the early screens was too repetitive for me.

C.J.

PLANET RATINGS

Originality	●●●
Graphics	●●●
Use of machine	●●●
Value for money	●●●

STAR RATING
White Dwarf

In Komplex you play the part of a ship commander on one of the strangest planets ever devised. The idea is to progress through the various different levels of the planet that is Komplex. Opposing you in this task are various denisons of the planet such as monitors, wardens and the millions of surface lazers.

The screen display is of a window looking out onto the planet. At the bottom of the screen is a large bar chart that shows the levels of all the defensive shields that your craft is equipped with. In the centre of the screen is the all important lazer which is used to blast the monitors and wardens into little bits should they be so foolish as to wander into your sights. Another feature of the planet are the motion detectors and also loads of black slabs (a la 2010). If you fly over a motion detector or into a black slab this sets off an alarm and even more of the wardens and monitors begin to assail you!

As the game is called 'Komplex' it could not be as simple as this — it isn't. There is a central control computer that can only be destroyed after the letters K O M P L E X have all been found, there is docking procedure and for some unknown reason, if you let the dust from the monitors that you have just blasted settle, then your shield strenght increases!

Also included in the Komplex editor, this is, Legend claim a collection of all the pokes that people would have thought up anyway! Thus this allows you to switch off all the nasties and various other useless things. Graphics are good, sound as good and can be expected from a Spectrum, but the game itself lacks any lasting appeal. The pictures are all very nice but it just doesn't add up to a good game.

JD

PLANET RATINGS

Originality	●●●●
Graphics	●●●●
Use of machine	●●●●
Value for money	●●●

STAR RATING
White Dwarf

Hyper Sports is the first of the Konami arcade machines to be licensed by Ocean under the Imagine label (see news).

Anybody who has played the arcade game will immediately recognise the six events represented in this

version. They are swimming, skeet shoot, horse jump, archery, triple jump and weight lifting. The pole vault has had to be omitted from the computer versions because of memory constraints however this doesn't destract from the game.

Each event is performed in the standard "Decathlon" style by pressing user defined keys to build up speed before pressing another to jump or breathe in the swimming.

Correct breathing is essential for a good time in the swimming event for taking a breath underwater can have predictable effects.

If you finish within the set time you qualify for the

next event.

This is true of all events and is my only critiscim of the game. The fact that you have to perfect one event before you even get a chance in the next one. Obviously this is true in the original arcade game where they want the maximum games, and therefore 10p's in a day, but it would have been sporting to allow home users to practice individual events.

The games graphics are excellent, a lot better than in Daley's Deacthlon, with faultless scrolling and no smudging of colours, This I understand is due to a new technique Ocean have developed where they can get 4 colours into one attribute square where only 2 are normally feasible.

I was delighted to see that they found room to include all the extra little features that make a game so much more enjoyable. Such as the man winking after he has achieved a

perfect score in the skeet shoot and the weightlifters knees wobbling as he struggles to lift the bar. This is probably why the programmers were only left with 2 spare bytes.

The only question is, where does it leave Daley Thompsons Supertest? This is Ocean's own sequel to Daley's Decathlon and features events that are covered by this and Durrel's Brian Jack's Superstar challenge. Development of it was well on its way when the Konami deal was signed. Either way it will do well if it matches the quality of Hyper Sports which is destined for number one.

T. H.

PLANET RATINGS

Originality	●
Graphics	●●●●●
Use of machine	●●●●●
Value for money	●●●●●

STAR RATING
Nova

58

Title: Dangermouse in Double Trouble
Computer: Amstrad
Supplier: Creative Sparks
Price: £7.95

There have been a lot of criticisms of 'spin-off' games, ie games that use characters or events from other media. The original complaints were that the game play would suffer merely to keep within the bounds of the story.

Luckily with games like Ghost Busters, and The Fourth Protocol, this has not happened, but with Dangermouse I'm afraid that all the worst fears were realised.

Dangermouse is one of the most appalling games that I have ever seen. It comes in three sections or episodes. In part one DM is flying his aerocar toward a jungle. Towards him are flying various robots, in earlier levels all you have to do is line yourself up with the nasty and it is shot down automatically! (yawn). However in later levels it gets a bit harder as you need to select which nasty it is that you are going to shoot on another screen at the bottom of the main display. This bit is very easy.

On the second level you have to jump across a pond on the back of an alligator a la Pitfall. Then jump over a puma type creature, or for bonus points he can run to the top of a tree and do a Tarzan call and scare the animals away.

In the third level (great graphics shame about the etc. etc.) you have to press buttons according to colours and which ones the Baron is pointing to, during this time Penfold is running around being chased by Nero and will mess up DM if he doesn't jump.

Then it's back to the beginning again. Overall this is a very tedious and boring game. The graphics are quite pretty and on the highest level it does give some challenge, but the game play is still extremely boring. Considering the subject matter it is probably aimed at a young (less than 12) market, but even so I know a lot of very young players that would find it as boring as I did.
M.R.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Nebula

Title: Tapper
Computer: Spectrum 48K
Supplier: U.S. Gold
Price: £7.95

My arcade weary brain wasn't really looking forward to reviewing yet another 'official' version of yet another arcade 'classic', but I have to admit that Tapper won me over. This is the first arcade game that I've played for quite a while that had me up until after midnight trying to beat my own high score.

You take the part of a barman who has to ensure that all the customers in his bar are served with drinks, and, at the same time collect all the empties that they send back.

The screen layout consists of four long bars along which the customers progress in their search for booze. If they reach the end of the bar, then your bartender is flung bodily along the bar (just like a Clint Eastwood western) and loses a life. Pressing the 'fire' button sends a drink to the nearest customer and sends him or her back to the far end of the bar, but if you send too many drinks they'll go shooting off the bar and smash, losing you another life. The same happens if you fail to collect any of the empty glasses flung back at you.

Like a lot of the best games it's really quite simple to play, but hard to master. At first, you only have a few drinkers to cope with, but, as you progress, the number of glassess flying back and forth and the number of people advancing towards you (from opposite directions on some screens) become really confusing, and you end up in a complete panic prior to screaming in frustration and collapsing over a steaming keyboard. Even so, Tapper is one of those increasingly rare games that will have you going back for one more try, over and over again.

The graphics are about as good as you could expect, given the limitations of the Spectrum's screen display, and the figure of your bartender looks suitably panic-stricken as he rushes to and 'fro. The only minor criticism I have of the graphics is that sometimes, when two customer sprites overlap closely, they can almost completely cancel each other out and become virtually invisible, given away only by the occasional flicker. This can be a bit confusing, though it doesn't happen very often, and certainly doesn't spoil what is an enjoyable and addictive game.
C.J.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Red Giant

59

Title:	Taskmaster
Computer:	Commodore 64
Supplier:	Sparklers
Price:	£2.50

King Otto's beautiful daughter has captured your heart and to win her hand you must complete seven tasks.

The first task is to spend a night in the Valley of the Zombies. As you watch the sunset the zombies appear. Armed with a gun, and presumably some silver bullets, you must shoot them and avoid their touch until the sun rises again.

After mastering this task you are transported to a forest housing a very unfriendly wizard. If you linger long enough for him to fire a magical bolt or two, you may as well give up. The best tactics I found was to spin around, rapidly firing as I did so in the hope that I could blast him before he materialised fully.

The third task is to collect four statues whilst being attacked by ravenous vampire bats. Not my idea of a picnic. The 3D graphics can be a little confusing at this point but frantic shooting will usually see you through.

Evil worshippers are your next challenge and quite a problem they proved to be. These cowled monks have a very dirty habit of shooting back. I never managed to pass this challenge so the next two challenges remain a mystery.

The seventh task is to face the ultimate challenge: the Castle of the Birdmen. Exactly what the ultimate challenge is I don't know but judging by the other tasks it must be extremely nasty indeed. Perhaps I'm better not knowing.

JG

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
White Dwarf

Title:	Star League Baseball
Computer:	Commodore 64
Supplier:	Activision
Price:	£10.99

Baseball is not a well-known sport in this country and yet the success of Imagine's World Series Baseball must indicate a certain amount of interest in the subject. Now Activision's version of the sport is on the scene, how does it compare?

The first obvious difference is the viewpoint which is from the first base side, parallel to the pitcher's field of action. Next the less sophisticated graphics and lack of a large, live action projection screen is apparent.

The options available belie the American origins of the game, where more emphasis is placed on tactics for a more informed audience.

To give you a chance at batting practice you can elect to face 'Heat' Muldoon in a series of random pitches until such time as you feel ready for action in the big game.

The options for the batter involve two joytick positions and the fire button. If the fire button is held the ball is bunted and if pressed briefly a full swing is played.

The main game consists of the usual nine innings and the pitching functions

Title:	Warlord
Computer:	Spectrum 48K
Supplier:	Interceptor Micros
Price:	£7.95

I enjoyed 'Message From Andromeda', which as one of Interceptor's earlier adventures, so I was quite looking forward to playing Warlord when it arrived. However, having played it for a while, I now have a rather mixed view of it. On the whole I quite like it, but I do feel that some rather sloppy flaws have been allowed to creep in, which could easily have been weeded out in the early stages of development.

The plot casts you in the role of a Celtic Warlord, cast onto some strange Otherworld. Your task is not just to find your way back to the real world, but to do so before a Roman Warlord, who has also been placed on that world. Both you and the Roman are the champions of your people, and the first to return can claim victory in the war between your two nations.

Thankfully the plot is quite original, with nary a dwarf in sight. The graphics of the various locations, though quite small, are instantly drawn and highly detailed. Excellent use was made of shading in these pictures, often using very small groups of pixels, and clearly a lot of effort has gone into them. I wish though, that a similar attention to detail had been lavished upon the game's Vocabulary. Any adventure that does not recognise the verb 'Open' is clearly going come in for some criticism, and rightly so. Another aspect of the game that I found irritating was that often, upon arriving at a new location, you will be told that you can see, for example, a tree or a bridge. Then as soon as you attempt to manipulate or examine these things it turns out that the program does not recognise the words 'tree' or 'bridge'. There doesn't appear to be a 'Help' facility either, which is something I missed a lot. Oh, and the dreaded spelling mistakes has cropped up too, with 'weapon' spelt 'weopon'.

As I mentioned earlier, those sorts of flaws are just plain sloppy and could easi-

of the eight joystick positions depends on the team selected at the commencement of the game. Here a little more instruction would have been helpful to explain knucklers, sinkers, change ups, sliders and screwballs.

When the ball is struck, the nearest fielder to its landing place comes under joystick control but I found the 3D view made it difficult to anticipate trajectory, but I have that problem with many 3D games.

On retrieving the ball the fielder throws it back to a base selected by the four main points of the joystick, or the pitcher if the stick is not moved.

Playing against the computer is not the easiest way to learn tactics. It only has one level of play and that's a pretty high standard. As with most sports game, a human opponent is always preferable.

Now for the big question, which version do I prefer? Sorry but I'm going to duck out of this one because it depends on whether game complexity or graphic sophistication is the crucial factor. Ocean have the graphics but Activision have the game.

JG

PLANET RATINGS

Originality	●●●
Graphics	●●●●
Use of machine	●●●●
Value for money	●●●●

STAR RATING
Bright Star

---

ly have been dealt with before the game was released.

That aside, the adventure, nonetheless, manages to generate a fair bit of interest right from the start, and this, I think, is almost entirely due to the quality of the graphics. The text seems to be fairly businesslike.

The adventure is rated "advanced", and I think I'd agree with that, having made little progress so far, and having come to a halt at a bridge guarded by a warrior. I will go back to Warlord, but I'd be more confident if I felt that I would get the occasional helpful response form the game.

C.J.

PLANET RATINGS

Originality	●●●
Graphics	●●●●
Use of machine	●●●
Value for money	●●●

STAR RATING
Bright Star

Title:	Mad Doctor
Computer:	Commodore 64
Supplier:	Creative Sparks
Price:	£7.95

One thing is guaranteed, this game will make you a new man, or woman, or mixture of the two. Subtitled 'building a better body', it has nothing to do with weight lifting or aerobics.

The Mad Doctor, Dr Franz Johann Blockenspirl of Strudelberg, has a creative urge more akin to God than an artist. In an orgy of spare part surgery, he wants to create a perfect human being. The Doc's identity is the one you adopt if you take up the challenge.

Strudelberg consists of several locations: the Doctor's castle, the poor part of the village, the centre of the village, the graveyard and Lightening Hill. Within these locations are the rooms of this 3D graphic adventure.

The Doctor starts off in his living quarters of his castle and he must venture forth to find the spare parts and tools to build his creation. While going about his necromantic deeds he must not upset the villagers and underground passages provide a cloak of secrecy for him whenever possible.

The screen display has an action window showing the 3D scene. Under this is the text and status window. This shows the state of the Doctor's health and energy levels, his location, time of-day, attitude of the villagers and an option menu.

Each location gives a different set of possibilities which may be scrolled onto the menu or selected by manipulation of the joystick with the fire button pressed. For example, in his laboratory the menu relates to the examination of the corpses. This is necessary to select the best parts for his creation. In the village, however, the menu relates to examining the villages, attacking them and carrying off the bodies.

The villagers lead lives of their own, wandering about at random. At night hardly anyone is around but during the day the place is teeming with action. Should the Doctor choose to attack someone when others are present, they will rush to the aid of their friend and the Doctors life will be in danger.

Easy pickings can be found in the graveyard but the condition of the corpses vary. A certain amount of GBH is therefore necessary to accomplish the Doctor's task. Equipment is the other essential for synthesising life and luckily the village has a college and a hospital which are fully equipped. A certain degree of reading around the subject is also necessary.

When the creature has been built it gains life by being exposed to electrical disturbances on Lightening Hill. Next it is presented to the villagers in the village hall, where the Mad Doctor will be judged on his creation. A perfect specimen will be hailed as a breakthrough, a poor one will seal the Doctor's fate and he will be hanged.

Despite the rather lurid subject of this adventure, it is totally absorbing. The graphics are passable, though not great, but the sound effects are very good indeed.

Nice to see a game with plenty of body.

JG

PLANET RATINGS

Originality	●●●●●
Graphics	●●●●
Use of machine	●●●●
Value for money	●●●●

STAR RATING
Red Giant

61

Title:	Elidon
Computer:	Commodore 64
Supplier:	Orpheus
Price:	£9.95

It is a fact that computer gaming has become principally a male preserve and yet any teacher of computer studies will say that girls are just as interested as boys in programming. My theory as to why this anomaly has occured is that the heroes of most games fulfil the male macho image and reinforce stereotypes. It was refreshing, therefore, to find a different approach in this game from Orpheus.

Elidon is the secret forest of the fairies where the seven flowers of Finvarra grow. Seven potions ensure the growth of the Finvarra flowers but the Faerie queen has lost them in her kingdom.

The kingdom of Elidon spreads over 250 screens of action and each new room could contain a new find or a danger. The dangers vary from butterflies to a multitude of strange ethereal creatures all of which are hungry for Faerie dust. The dust enables you to fly and as you progress through the maze your supply dwindles. Occasionally you will find a fresh store of dust to replenish your stock but collision with a hungry creature makes the stock dwindle alarmingly.

The finds not only include the potions but also useful objects such as a torch, pan pipes, and a strange fruit. Only three of these objects may be carried at a time so care should be exercised in choosing which items to carry.

In some of the rooms tree spirits lurk in the dark waiting to feed of Faerie dust. The torch immediately banishes them to the other world if carried into their darkened room.

The graphics are very good, especially the Faerie's movement and the music by Grieg does not irritate even though it is the same section repeated over and over. Non-classical fans can easily turn the music off by the touch of a key. Even the packaging is attractive with an Arthur Rackham style watercolour illustration and an attractively arranged instruction sheet.

The subject of fairies may at first seem a little bit 'wet' but let me assure you that there are more to fairies than meets the eye in this excellent fantasy adventure. **JG**

PLANET RATINGS

Originality	●●●
Graphics	●●●●
Use of machine	●●●●
Value for money	●●●●

STAR RATING
Red Giant

Title:	Ghetto Blaster
Computer:	CBM 64
Supplier:	Virgin
Price:	£7.95

'Ghetto Blaster' marks yet another release from the Virgin software stable, this time under the guise of Gibbo software.

Basically, the story revolves around you, armed with a 'Ghetto Blaster' (a large cassette machine of the kind that are sported around like suitcases) and some of the strangest characters yet seen in a computer game. In the game you have to fire musical notes at them to make the inhabitants of this computerised 'Empire Road' dance.

The story goes this, you are 'Rockin Rodney' who after a stint at unemployment finally gets a job as a messenger boy for a record company. He has to deliver 10 demo tapes to the head office of the record company who employ Rodney, before the end of the day. It is also Rodney's job to make sure that people hear the music from his ghetto blaster and get them dancing.

Naturally the game has its contingent of people who are either 'tone deaf' or who generally act in an unpleasant way about the music being blasted at them.

Among these people are policemen who try to attack Rodney and break his ghetto blaster. Thus stopping him from both getting the people to dance, and also from delivering his tape.

The graphics are quite well implemented, they are smoothly displayed with the option to cross the road and to search for houses on the other side to take the tapes to and from the Interdisc head offices.

But sadly, the graphics are all that is good about the game. The so called 12 original tracks of 'Rockin Rythms' are repetitive and quite annoying after a short time, there are also some serious bugs still left in the game. For instance, if you should enter the park, then the top of the screen starts corrupting! with garbage characters destroying part of the top line, although the mushrooms in the park are

Title:	Dambusters
Computer:	C64
Supplier:	US Gold/Sydney Developments
Price:	£9.95

62

On loading the game you are greeted by a beautiful picture of a Lancaster bomber in its prime, on a runway in the dead of the night. It is this standard of graphics that sets the scene throughout the game. When the game starts up you get a menu of options in order of difficulty — dam approach, English channel onward, or taking off from Scampton and flying the whole distance to Germany.

Taking off from Scampton is just like any other flight simulator, except that on a multi engined bomber a lot of people have to work in co-operation with each other. Instead of plumbing for the easy option Sydney Developments have got the feel of all the people in a bomber down perfectly. You do this by switching between eight different screens. Each screen represents the station of somebody in the plane be it pilot, gunner, or enginner.

The pilot's screen is the one that looks most like a normal, run of the mill, flight simulator. With a horizon, instruments, and view through the cockpit window of the night sky over Europe. You can also see the night fighters, searchlights, flack, and barrage balloons — although you can't do anything about them. That's up to the gunners, who have a set of cross-hairs where your guns will fire. However you must remember that by the time the bullets get there the cross and the target may have moved.

The two gunners positions are very much like a normal arcade game, you control cross hairs and blast away with your machine guns at the searchlights, fighters, and barrage balloons. A record is kept of the number of at-

a nice feature, with Rodney proclaiming 'I feel inclined to blow my mind'.

To make matters worse, the garbage gets more and more common in other screens, in a short while, the places in which you visit (named in the top lines) are soon unreadable. Another 'feature' is that after any length of time, there are no 'ordinary' people left to Ghetto Blast (only tone deaf walkers) to play your music to, thus stopping you from effectively playing the game, and gaining points.

The story line is exceptionally banal, for a game of this price; the music, while being well implemented with some nice 'Dub' effects, soon becomes extremely annoying and distracting. Luckily there is a feature to lower the volume on the 'Ghetto Blaster' display at the bottom of the screen.

This is a very poor implementation of a game with a sound concept. The idea of delivering tapes to and from houses in a loose arcade adventure style format, is a good one but sadly, the idea never makes it off the conceptual stage.

Until Virgin or Gibbo software take out the bugs, make the game a little more exciting, and bring a game of this standard down to a low enough price (considering other games of a much higher standard at this price), I would certainly not buy this game . . . my final comment is forget it.

C.G.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Nebula

"R"E"V"I"E"W"S"

Oh, this is ridiculous. I've lost count of the number of times I've played this game and I still can't figure out what on earth I'm supposed to be doing

OK, so the graphics are upto Mikro-Gen's usual high standard, and the game has to be addictive or else I would have given up on it by now, but that doesn't help me one little bit does it? I still can't figure out what to do with that silly looking little red whale. I thought that the chocolate 10p bit went into the vending machine slot (the one marked '10p', seems like a reasonable assumption doesn't it?), but I've had that brat Herbert leaping all over the place and I can't get the coin into the slot. I'm obviously overlooking something really obvious since I can't seem to manipulate any of the objects in the way that they were presumably intended to be used.

As usual in the Wally series, some of the locations that you visit contain arcade sequences that stand on their own, and, as usual, most of these sequences leave me totally baffled. For instance, the tennis screen is mentioned in the instructions, as is the fact that a tennis racquet might help. The trouble is that even after finding the racquet I still get pummelled to death by a load of tennis balls. Mind you, I've gotten further with this game then I did with its predecesor, so maybe there's still a chance

for me to reach some level of adequacy.

Still, enough about my problems. As I mentioned, Mikro-Gen have done their usual good job in producing this Heir to the Wally line. The game itself is quite addictive, and this is helped by the now familiar style of graphics, with those big, solid sprites that look as if they could flatten any number of space invaders without batting an eyelid.

However, though I like 'Dummy Run' a lot, I can't help wondering what comes next. Certainly, this game does not improve upon 'Everyone's Wally' in

the way that, that game improved upon 'Pyjamarama'. Still, it's an envious position for a software house to be in, when their new releases are compared with their previous efforts, rather than to the work of any other software house.

C.J.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Red Giant

tacks and your successes. If night fighters are too successful then you are rewarded with a row of bullet holes on the screen.

Engines are controlled from the engineer's station, there are rev counters, throttles, fire extinguishers, and booster controls. I found that controlling the engines was a bit difficult and it was tricky to tell the speed accurately, but after a while you can manage.

The navigator's area is composed of a multi-screen map of Europe, you move a cross with the joystick, this results in a line appearing on the compass in the cockpit. Line that up in the centre and

you are flying towards the cross.

When you have finally got to the dam you can go on to the bomb aimer's screen. On this, you turn on the famous spotlights and fine tune your height. You can then spin up the bomb and prepare to drop.

When the bomb is up to speed the front gunner's sights are replaced with the bomb sights. These are vertical bars that you line up with the towers on the dam. Line it up then drop the bomb. If all goes well you are rewarded with some nice graphics of the bomb skipping along the water and the dam blowing with a satisfying crump and the water gushing out.

When you make your attack run you have to drop the bomb at just the right height (helped by the spotlights) and speed. The aiming must be spot on as well. If you miss, the program will tell you exactly what you got wrong so that you can try the next time.

All in all this is a very impressive game. There are some problems such as the engine noise still being present when the engines are all off, and there being no night fighters, flak, or searchlights around on the final approach to the dam, you'd think that the Germans would protect their interest slightly better. Despite these I really like the game.

PLANET RATINGS

Originality
Graphics
Use of machine
Value for money

STAR RATING
Red Giant

63

Le Mans

Title:	Le Mans
Computer:	Einstein
Supplier:	Electric Software
Price:	£12.95

A game for the Einstein is a rare thing and usually means that the game was developed on the Einstein for the MSX range of computers. The leader in this market are Electric software and it is they who have released Le Mans.

The game is, surprise surprise, about race cars specifically the large endurance type that take part in the 24 hour races. The display is of a drivers eye view of the cockpit of such a beast. This display features the most impor-tant gauge, the rev clock as well as a rather cute gear stick and a pair of wing mirrors. The idea is of course to win the race, this involves rather fast reactions to keep the car on the track. Control is left and right, accelerate and brake with the gears being chang-ed automaticlly by the driver-his hand actually pops up and moves the stick.

The graphics are quite good while not stunning, giving good pictures of the other cars in the race, and sound is well covered as well. The game features a demo which brings me to the great failing of this game, that is that the only way to see what lies around the next bend is to watch the demo mode. The game itself is too hard requiring immense skill just to stay in a straight line. So to sum, up a reasonable game but only for people with hyper fast reactions!

J.D.

PLANET RATINGS

Originality	
Graphics	
Use of machine	
Value for money	

STAR RATING
White Drawf

The Covenant

Title:	The Covenant
Computer:	Spectrum, Amstrad
Supplier:	PSS
Price:	£6.95

In the game, your mission as sole survivor of your race, is to collect the 64 pieces of the Covenant that will reveal the total knowledge of your race.

The pieces are unfortunately scattered throughout a 256 room cavern filled with 64 different species of critters. These you must stun and capture (once you have found the appropriate stungun) to transport back with you to repopulate your world.

The creature that you play, is beautifully animated in no less than 34 steps (per cycle) and adds tremendous-ly to the atmosphere of the game as does the status screen. This displays the pieces of the Covenant that you have found, the critters in your spaceship hold and your energy that is represented by three beating hearts.

The games creator, Paul Hutchinson, gave me a guid-ed tour of the caverns and made the game look redictlessly easy however it will take me some time before I find even a fraction of the Covenant. **T.H.**

PLANET RATINGS

Originality	
Graphics	
Use of machine	
Value for money	

STAR RATING
Bright Star

Don't Buy This

Title:	Don't Buy This
Computer:	Spectrum
Supplier:	Firebird
Price:	£2.50

Very rarely is it given to me to comment on a truly ex-cellent piece of Spectrum software, 'Don't Buy This' by Firebird is five such games. Firebird claim that these are five of the worst games ever and all of the titles live up to this lofty claim.

First comes Race Ace, an inspired title for an ex-cellently bad game. The display is awful the sound terrible and the game itself totally impossible. Any serious bad game freak will simply flip over the blocky graphics and flickery animation.

Next comes Fido, which is not quite as good as Race Ace as the display is almost passable but the game makes up for this by being excellently boring, this is mind nummingly boring in the traditional style. After a few hours of this you could find watching the grass grow interesting!

Weasel Willy introduces a new style of writing for bad game programmers, that is don't let them play the game until they have figured out how to define the keys, which takes ap-proximately 3 hours and really isn't worth the ef-fort. Still the display is rather bad and of course the sound is pathetic.

Firebird have introduc-ed another new technique with the next game, that is putting the sequel to a game on the same cassette thus we have the long awaited Fido 2. This was at first a bit of a disappoint-ment as the same, almost good display is used, but the addition of some badly drawn birds and a flimsy story line to explain them adds a certain something to this title.

Finally we have Fruit Machine which is the pinacle of Firebird's acheivements. It combines the awful display of Race Ace with the incredible bor-ingness of Weasel Willy and the terrible additions of Fido 2 to make a game that is indescribable. If you can stay awake long enough to figure out what is happen-ing in this game of games then you deserve a prize — another copy of Don't Buy This. **JD**

PLANET RATINGS

Originality	O
Graphics	OOO
Use of machine	
Value for money	O

STAR RATING
3 Black Holes

S·U·B·S·C·R·I·P·T·I·O·N·S

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Rory Newman adds graphics to your games in the latest in our games writing series.

GIANT GAMES

Hello again! This month we will be dealing with UDGs and Hi-res; that means User Definable Graphics or High Resolution. For the past three months we have been using keyboard characters. This month we shall be using our own graphics, made up just how we want them. Because of the complexity at a stage like this, I shall be dealing with it in sections for the four main computers we have been concerned with: the Vic 20, Commodore 64, Commodore 16 and Spectrum.

UDGs — User definable graphics are easily available on the Vic, C 64 and Spectrum; that is when the character is replaced by one you designed yourself.

Hi-res — High Resolution is when you have a grid, each and any point on it can be plotted. Thus is easily available for the Spectrum and the C16.

A Pixel — each square is made up of 64 pixels, 8x8. The character A on the Vic is as follows: ★ means OFF and the $ means ON

```
★ ★ ★ $ $ ★ ★ ★
★ ★ $ ★ ★ $ ★ ★
★ $ ★ ★ ★ ★ $ ★
$ ★ ★ ★ ★ ★ ★ $
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$ ★ ★ ★ ★ ★ ★ $
$ ★ ★ ★ ★ ★ ★ $
```

So for Hi-res the screen will be a massive grid on which any point can be plotted.

UDGs — for UDGs we shall need to work out the pattern of the graphic to POKE it into memory. For those who understand binary, it can either be 1 the square is filled in, or 0 the square is empty. Thus you have a binary pattern.

For example, the top line of that A graphic, is 000 11000, but the machine only accepts decimals, so it must be converted. It is worked out as follows:

Decimals goes up in units, tens hundreds, thousands etc, multiplying by 10 each time. Binary, on the other hand, multiplies by 2 giving 1, 2, 4, 8, 16, 32 etc. A graphic is therefore worked out like this:

128	64	32	16	8	4	2	1
0	0	1	1	1	0	0	0
0	0	1	1	1	0	0	0
1	0	0	1	0	0	1	0
1	1	1	1	1	1	1	0
0	0	1	1	1	0	0	0
0	0	1	1	1	0	0	0
0	0	1	0	1	0	0	0
0	0	1	0	1	0	0	0

this would be:

```
32 + 16 + 8 = 56
32 + 16 + 8 = 56
128 + 16 + 2 = 146
128 + 64 + 32 + 16 + 8 + 4 + 2 = 254
32 + 16 + 8 = 56
32 + 16 + 8 = 56
32 + 8 = 40
32 + 8 = 40
```

This, as you can (or will be able to) see is a feeble attempt at a man. I'm sure you, especially the artists among you, will be able to do better than me; draw an 8x8 grid and one square can be filled in, or open.

I think this is the time to show you Program 1. This is a program for the Vic only. It saw it in a magazine. It didn't work, but I fixed it. Anyway, it's not a game; it's a utility. After typing in the program, save it and run it. It is a graphics designers program for working out the data for your UDGs. You are presented with a 16x16 grid, that's four squares. You then draw your character, using the cursor keys to move, Function key 1 to Plot, Function key 3 to unplot, i.e. to rub it out, Function key 2 (Shift + Function key 1) will start plotting point after point, gradually filling the screen up, until you press a key, and Function key 4 (Shift + Function key 3) will do the opposite; it will unplot, square after square until you press a key. If you want to design just one graphic, then just do one 8x8 block. When you have finished press Function key 8 (Shift + Function key 7) and a message will come up saying "CONFIRM — ANY KEY", press a key and it will print out the separate data for each 8x8 block, with the graphic and whole 16x16 block at the bottom. You don't have to use every block.

It is a very useful program to have as it will save hours of working out the graphics on paper until they are right and then trying to work out the Data. It can also be useful for trying to design 16x16 graphics. I have designed a

```
1 POKE51,0:POKE52,28:POKE55,0:POKE56,28
5 POKE36879,8
6 GOSUB2000
10 FORT=0TO511:POKET+7168,PEEK(32768+T):NEXT
20 POKE36869,255:PRINT"◧":POKE650,255
30 FORT=7168TO7167+32:POKET,0:NEXT
40 FORT=7168+32TO7167+40:POKET,255:NEXT
50 PRINT"◧     1234567812345678"
55 PRINT"◧ _____ "
70 FORZ=1TO2:FORT=1TO8:PRINT"◧";T;"▮ |              | ":NEXT:NEXT
80 PRINT"◧ _____ "
90 TL=7727:CL=38447:PP=TL:CP=CL:X=1:Y=1:MXCX=128:DL=100
100 PRINT"◼░░░░░░░░░░░░░░░░░░░◻A░░BC";
105 PRINT"◻◼            ▮▮";
```

```
106 PRINT"◨                              ◼";
107 FORG=7168+(8*32)TO7167+(8*33):POKEG,0:NEXTG
108 FORV=7168+32TO7167+40:POKEV,255:NEXTV
110 GETA$:IFA$=""THENAP=0:GOSUB500:GOTO110
120 AP=0
130 IFA$="◧"THENGOSUB230:GOSUB500:GOTO110
140 IFA$="□"THENGOSUB260:GOSUB500:GOTO110
150 IFA$="◨"THENGOSUB290:GOSUB500:GOTO110
160 IFA$="▮▮"THENGOSUB330:GOSUB500:GOTO110
170 IFA$="▄"THENGOSUB370:GOTO110
180 IFA$="◥"THENGOSUB710:GOTO90
190 IFA$="◼"THENGOSUB440:GOTO110
200 IFA$="◤"THENGOSUB900:GOTO90
210 IFA$="◼"THENGOSUB580
220 GOTO110
230 IFY>15THENRETURN
240 Y=Y+1:AP=22
250 RETURN
260 IFY<2THENRETURN
270 Y=Y-1:AP=-22
280 RETURN
290 IFX>15THENRETURN
300 X=X+1:AP=1
310 MX=MX/2:IFMX<1THENMX=128
320 RETURN
330 IFX<2THENRETURN
340 X=X-1:AP=-1
350 MX=MX*2:IFMX>128THENMX=1
360 RETURN
370 CB=(INT(Y/9)*1)+INT(X/9)
380 REMIFY>8THENPY=Y-1:GOTO400
390 PY=Y
400 CV=7168+(CB*8)+PY-1
410 POKEPP,4:POKECP,7
420 POKECV,PEEK(CV)ORMX
430 RETURN
440 CM=(INT(Y/9)*1)+INT(X/9)
450 REMIFY>8THENPY=Y-1:GOTO470
460 PY=Y
470 CV=7168+(CM*8)+PY-1
480 POKEPP,160:POKECV,PEEK(CV)-(PEEK(CV)ANDMX)
490 RETURN
500 PP=PP+AP:CP=CP+AP
510 RM=PEEK(PP):CM=PEEK(CP)
520 POKEPP,4:POKECP,1
530 FORI=1TODL:NEXT
540 POKEPP,RM:POKECP,CM
550 FORI=1TODL:NEXT
560 AP=0
570 RETURN
580 PRINT"◧▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▮▮▮CONFIRM-ANY KEY!◼";
590 CF=0
600 CF=CF+1:IFCF>300THENPRINT"◧▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▨▮▮▮         ◼";:
RETURN
610 GETCF$:IFCF$=""THEN600
615 PRINT
620 FORT=7680TO8185:POKET,160:NEXT
```

good tank, a ship, a car and various other vehicles. The pictures become much clearer, but, remember, if you want to poke this 16x16 graphic, it is a 2x2 square, so when moving alterations will have to be made in order to move correctly. With a bit of common sense, it's not too hard.

Now, how do you use it? We'll start with UDGs on the Vic 20.

First, we will look at progam 2. Line 10 clears the screen.

Line 20	is a little routine that should be learned by heart. What it does is fill the UDG area (7168-7679) with the character set square in the UDG mode you still have the letters not weird squiggles.
Line 30	uses the variable S as the number of graphics to be used. If you want another graphic, just change S to 2, so S = 2 and set up the data statements at line S1. Remember 8 data statements with a comma between them.
Line 40	sets up a for next loop so it reads 8 data for every S. It then pokes them into memory at the UDG location. Another routine that the budding programmer should learn.
Line 50	is the data
Line 60	switches to UDG modfe; very useful location 36869 Poke 36869,240 will return to normal upper case mode. Poke 36869,241 will give upper inversed case. Poke 36869,242 will do lower normal case. Poke 36869,243 will do lower inverse case.

Talking of inversed Video, if, after a while, you have lots of graphics taking up the letter set, if you print in inverse mode:

PRINT '' CONTROL 9 ....''you will get the letters coming out as normal in UDG mode. Anyway this program when run will change the @ key to that man you designed earlier. After the @ key, therefore, you go through the letter set. Look at page 141 of the Vic Manual for the complete set. Just a couple of points: (1) always have a comma between two pieces of data; (2) once a program has been typed in to get to the UDG mode just type POKE 36869,255 and it will switch to UDG mode, so there is no need to run the program.

Well, that't the Vic. Colour commands stay the same and can be used.

```
630 FORI=0TO7:PRINT"■";TAB(2);PEEK(7168+I);TAB(14);PEEK(7168+I+8):NEXT:PRINT
640 FORI=16TO23:PRINT"■";TAB(2);PEEK(7168+I);TAB(14);PEEK(7168+I+8):NEXT:PRINT
650 PRINT"█████████████████████████████A"
660 PRINT"█████████████████████████B█████████C"
670 PRINT"██████████████████████R█A████BC"
680 PRINT"██TYPE C TO CLEAR█";
690 GETCC$:IFCC$<>"C"THEN690
700 PRINT"◢":POKE36869,240:END
710 DL=10
720 PRINT"████████████████████████████████████ANY KEY TO STOP█";
730 FORYY=1TO8
740 FORXX=1TO16
750 GOSUB370:GOSUB290:GOSUB500
760 GETZ$:IFZ$=""THEN780
770 GOTO870
780 NEXTXX
790 GOSUB230:GOSUB500
800 FORXX=1TO16
810 GOSUB370:GOSUB330:GOSUB500
820 GETZ$:IFZ$=""THEN840
830 GOTO870
840 NEXTXX
850 GOSUB230:GOSUB500
860 NEXTYY
870 DL=100
880 PRINT"███████████████████████████████████                    █";
890 RETURN
900 DL=10
910 PRINT"████████████████████████████████████ANY KEY TO STOP█";
920 FORYY=1TO8
930 FORXX=1TO16
940 GOSUB440:GOSUB290:GOSUB500
950 GETZ$:IFZ$=""THEN970
960 GOTO1060
970 NEXTXX
980 GOSUB230:GOSUB500
990 FORXX=1TO16
1000 GOSUB440:GOSUB330:GOSUB500
1010 GETZ$:IFZ$=""THEN840
1020 GOTO870
1030 NEXTXX
1040 GOSUB230:GOSUB500
1050 NEXTYY
1060 DL=100
1070 PRINT"██████████████████████████████████                   █";
1080 RETURN
2000 PRINT"◤█    GRAPHIC DESINGER"
2010 PRINT"█BY R.P.NEWMAN"
2020 PRINT"█    ORIGINAL IDEA        PERSONAL SOFTWARE"
2030 PRINT"██CURSOR KEYS TO MOVE"
2040 PRINT"█F1 PLOT"
2050 PRINT"█F3 UNPLOT"
2060 PRINT"█F2 DRAW
2070 PRINT"█F4 UNDRAW"
2080 PRINT"█F8 SEE DATA"
2090 PRINT"█HIT ANY KEY"
2100 POKE198,0:WAIT198,1:PRINT"◤█":RETURN
60000 GOTO60000:REM"███████████████████████████
READY.
```

Now, we'll take a look at the Commodore 64. This will do a UDG as it did on the Vic 20.

Line 10	clears the screen
Line 20	switches the RAM and ROM around and stops the INTERRUPT so the character set is put into the UDG location 12288
Line 30	is a little routine that all 64 owners should learn. It fills UDG area (12288-14335) with the character set, so when in UDG mode, all characters that are not being used up by the UDGs will appear as normal.
Line 40	restarts the INTERRUPT and switches ROM and RAM back to normal.
Line 50	sets up S as a variable to be used for the number of UDGs to be used. For every 1 in box S, there must be 8 pieces of data, to make up the on character. If you have to have more UDGs, just change S to 2 so Line 50 will read S = 2, and add another Data statement. If you want you can continue on the end of Line 70 just put a comma and then your eight pieces of data. Remember, put a comma between 2 pieces of data, only if there is a piece of data on either side.
Line 60	sets up a For Next Loop so it reads 8 pieces of data for every S. It then pokes each piece of data into the memory location for UDGs and then the next piece into the next locations and so on. (Another routine to remember)
Line 70	is the data. Note: there is only a comma if there is a piece of data on either side.
Line 80	switches it into UDG mode. You will only have to type this in to get the graphics, once the program has been run. Location 53272 is very important and 28 will switch it to the UDGs stored at 12288. Other locations can be used, but the 28 will have to change into another number.

DIAGRAM 1

175

0 ← → 255

DIAGRAM 2

175

0   255

(Not to scale)

As you can see, Vic 20 and 64 UDGs are very similar. If you want to use all the letters up with UDGs, as on the Vic, if you put it into Inverse Video, it will print it as though it were not in UDG mode. Anyway, run this program and, after a while, it will say READY, with no cursor (the cursor disappears on the Vic as well) and, if you press the @ key, the man we designed earlier will come up on the screen. Also, as with the Vic, the UDGs can be the colour of any normal character.

On to the Spectrum then. This has UDGs and Hi-res. First, UDGs:

Line 10	clears the screen
Line 20	restores Line 50. This means that it will start reading the data at Line 50.
Line 30	sets up a For Next loop for the graphics. If two graphics are wanted, then it should read: Line 30 FOR A = USR "A" TO USR "B". If three charactrers are wanted, the "B" should become "C" and so on up to "U", but remember to put a comma in between the data only if there is a piece of data on either side.
Line 40	reads the data and pokes it into the USR location.
Line 50	is the data

Once the program has been typed in and run, you will have to get it into Graphics mode, if you want to see the characters you have designed. It can be done in two ways: you can press Symbol Shift + 9 until a flashing G appears, or you can press Caps Shift + 9.

So, that's UDGs: simple but neat. Now Hi-res.

This too is very simple. The colour can be altered

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by using the INK Command described last month. Anyway:

```
10 PLOT 10,10
20 DRAW 10,0
```

will plot the dot at 10,10 and draw a line 10 pixels along. (See diagram 1). Or

```
20 DRAW 0,10 will draw
```

it 10 pixels up (See diagram 2).

So to draw a line, plot the starting point and draw the amount of pixels along and then the amount up. Easy! The diagrams also show the amount of pixels usable to you to plot points, draw lines and define UDGs, but, can it be used together? Yes, it can. if in graphics mode, you can still use the plot facilities, so may have a background screen plotted out, and use UDG as characters. Easy but extemely useful!

And now for Hi-res on the C16. to plot a point

```
10 GRAPHIC 2
20 COLOUR 1,1
30 DRAW x, y
```

x is along and is 0 to 319
y is down and is 0 to 199

Colour can be changed to what you what (see last article).

To draw a line just add TO x,y at the end of the draw statement

```
30 DRAW 1,0,0 TO 319,0
```

If this replaces the old line 30 it will draw a line along the top. To rub out any point or line, just DRAW over it using DRAW 0,x,y(TO x,y). The 0 rubs it out. Also, to draw a line from the last point used, just use

DRAW 1, TO x,y. That will draw a line from the last point to x,y.

Another command is circle. Here is a table

CIRCLE 1, Center x, center y, radius circle
CIRCLE 1, Center x, center y, width, height oval
CIRCLE 1, Center x, center y, width, height, start, finish arc
CIRCLE 1, Center x, center y, width, height, angle rotated oval
CIRCLE 1, Center x, center y, width, height, point angle polygon

This is very versatile. Center x and center y are the center points in the circle. The radius is the

amount of pixels from the center. The width and height are in pixels; start and finish are locations where the first and last points are. The angle is in clockwise degrees. Point is start point and angle is the angle of the line. A square, the angle would be 90°, triangle, 60°, etc. There is another command: BOX.

BOX 1, x co-ordinate of first corner, y of first corner, x of second corner, y of second corner

That will draw a box. If wanted at an angle, add: '', angle of clockwise rotation in degrees'' and, if filled in, add '',1''. If you have made a shape that is fully joined up, you can fill it in by using

PAINT 1,x,y

x and y are any point in the actual shape. It will fill it up until it reaches a line, so it must be full up.

Well you've a month to try out H-res or UDGs. Next month I'll give you a UDG game for the Vic, 64, Spectrum and, possibly, the C16. I'll also be dealing with the mysteries of sound. Until then — 'bye!
Attributes: R. Hearn, D. Turfitt, T. Kite, MN.

```
10 PRINT"◻"
20 FORT=0TO511:POKE7168+T,PEEK(32768+T):NEXT
30 S=1
40 FORT=1TO(S*8):READA:POKE7167+T,A:NEXT
50 DATA56,56,146,254,56,56,40,40
60 POKE36869,255
READY.
```

```
10 PRINT"◻"
20 POKE56334,1:POKE1,51
30 FORT=0TO2047:POKE12288+T,PEEK(53248+T):NEXT
40 POKE1,55:POKE56334,0
50 S=1
60 FORT=1TO(S*8):READA:POKE12287+T,A:NEXT
70 DATA56,56,146,254,56,56,40,40
80 POKE53272,28
READY.
```

70

```
10 CLS
30 FOR A=USR "A" TO USR "A"+8
40 READ B: POKE A,B: NEXT A
50 DATA 56,56,146,254,56,56,40,40
READY.
```

Rampant Squashy Things

by Michael Kempster

What a shame! You have been chosen to rid the maze complex of the Rampant Squashy Things. The only way to destroy them is to collect all the thirty crystals throughout the maze. Luckily the aliens cannot appear in a room with a crystal but once the crystal has been collected the room will be inhabited next time you enter.

The aliens go twice as fast through walls than on empty ground. Go into a crystal to collect it and continue on your journey. In one or two rooms, instead of a crystal there will be an alien.

When the game is run please wait for 20 seconds and the main title will appear. While you are waiting there will be notes which change to signify the game working.

Set the margin to 0, by POKE 82,0. This is so that the long lines will fit in.

Type all data very carefully.

This game would be difficult to convert to another micro unless sprites are available, ie C64.

```
0 REM *******************************
1 REM ** RAMPANT SQUASHY THINGS **
2 REM **            by            **
3 REM **     Michael    Kempster  **
4 REM ** ------------------------ **
5 REM **        APR 1985          **
6 REM *******************************
7 REM
8 REM
10 GOSUB 25000
20 GOSUB 20000
30 FOR N=0 TO 3:A=USR(1568,N,0,0,0):NEXT N
:POKE 704,10:POKE 705,47
40 SC=0:X=125:Y=105:MAZX=1:MAZY=1:AS=1:F=0
:RST=0:CRX=0:CRY=0:AMC=0:LI=3:POKE 53278,0
50 GOSUB 15000:POKE 559,62:AX=125:AY=150
99 REM MAIN LOOP
100 ST=STICK(0):SOUND 0,200,10,10:SOUND 2,
Y,12,10:POKE 53768,15
110 X=X+((ST=7 OR ST=6 OR ST=5)-(ST=11 OR
ST=10 OR ST=9))*3:Y=Y+((ST=13 OR ST=9 OR S
T=5)-(ST=14 OR ST=10 OR ST=6))*3
120 N=USR(1568,0,X,Y,F+16):IF PEEK(53252)<
>0 THEN 1000
125 IF PEEK(53260)=4 AND PEEK(53262)=1 THE
N GOTO 1000
126 IF PEEK(53260)=2 AND PEEK(53261)=1 THE
N GOSUB 500
130 IF SUR=6 THEN N=USR(1568,1,CRX,CRY,F+1
2)
140 IF X>200 THEN X=50:MAZX=MAZX+1:GOSUB 6
00:GOTO 100
150 IF X<50 THEN X=200:MAZX=MAZX-1:GOSUB 6
00:GOTO 100
160 IF Y<40 THEN Y=170:MAZY=MAZY-1:GOSUB 6
00:GOTO 100
170 IF Y>170 THEN Y=40:MAZY=MAZY+1:GOSUB 6
00:GOTO 100
200 SOUND 0,0,0,0:SOUND 1,0,0,0:IF RST=0 T
HEN 300
210 AS=1:IF PEEK(53254)<>0 THEN AS=2
220 IF X<AX THEN AX=AX-AS:GOTO 240
230 AX=AX+AS:GOTO 240
240 IF Y<AY THEN AY=AY-AS:GOTO 260
250 AY=AY+AS
260 N=USR(1568,2,AX,AY,F+V6):POKE 53278,0
300 POKE 704,F*16+15:F=F+1:IF F=4 THEN F=0
310 GOTO 100
```

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```
500 MAZE(MAZX,MAZY)=10:AMC=AMC+1:SC=SC+10:
    N=USR(1568,1,0,0,0):CRX=0:CRY=0
510 POSITION 6,11:? #6;SC;:FOR N=100 TO 20
    0 STEP 4
520 SOUND 0,N,N/16,N/16:SOUND 1,N,10,N/16+
    2:NEXT N:POKE 53278,0
530 SOUND 0,0,0,0:SOUND 1,0,0,0:IF AMC=30
    THEN GOTO 3000
540 RETURN
600 REM
610 FOR N=0 TO 3:Q=USR(1568,N,0,0,0):NEXT
    N
620 GOSUB 15000:POKE 559,62
630 RETURN
1000 REM
1010 LI=LI-1:POSITION 18,11:? #6;LI;
1020 FOR N=0 TO 255 STEP 4:POKE 704,N:SOUN
     D 0,N,10,N/16+2:SOUND 1,N/10,12,15
1030 NEXT N:POKE 704,15:SOUND 0,0,0,0:SOUN
     D 1,0,0,0:FOR N=1 TO 50:NEXT N
1040 IF LI<=0 THEN 1500
1050 IF SUR=10 THEN X=50:Y=105:AX=125:AY=1
     05:GOSUB 1100:GOTO 100
1055 IF SUR=6 THEN X=50:Y=105:GOSUB 1100:G
     OTO 100
1060 X=125:Y=105:AX=125:AY=170:GOSUB 1100:
     GOTO 100
1100 N=USR(1568,0,X,Y,F+16):N=USR(1568,2,A
     X,AY,F+VG):POKE 53278,0:RETURN
1500 ? #6;CHR$(125):FOR N=0 TO 3:Q=USR(156
     8,N,0,0,0):NEXT N:POSITION 4,3:? #6;"GAME
     OVER"
1505 SOUND 0,0,0,0:SOUND 1,0,0,0:SOUND 2,0
     ,0,0
1510 POSITION 1,5:? #6;"PLEASE try AGAIN"
1515 IF SC>HI THEN HI=SC
1520 FOR N=1 TO 1000:NEXT N:GOSUB 21000:GO
     SUB 20000:GOTO 30
3000 ? #6;CHR$(125):FOR N=0 TO 3:Q=USR(156
     8,N,0,0,0):NEXT N
3005 SOUND 0,0,0,0:SOUND 1,0,0,0
3010 POSITION 3,1:? #6;"CONGRATULATIONS":P
     OSITION 4,3:? #6;"YOU HAVE WON ":POSITION
     9,5:? #6;"it"
3020 POSITION 6,7:? #6;"try again"
3030 FOR N=1 TO 1000:NEXT N
3040 GOTO 1515
```

```
15000 ? #6;CHR$(125):POKE 559,0:POSITION 0
      ,11:? #6;"score:";SC:POSITION 12,11:? #6;"
      lives:";LI
15010 COLOR 223:PLOT 0,10:DRAWTO 19,10:COL
      =INT(RND(0)*2)+1:COLOR 234:IF COL=1 THEN C
      OLOR 196
15020 SUR=MAZE(MAZX,MAZY):RST=1:IF SUR=6 T
      HEN RST=0
15030 IF SUR<>6 THEN AX=125:AY=105:VG=INT(
      RND(0)*3)*4
15040 IF VG=0 THEN POKE 706,54
15043 IF VG=4 THEN POKE 706,202
15045 IF VG=8 THEN POKE 706,246
15050 ON SUR GOTO 15100,15200,15300,15400,
      15500,15600,15700,15800,15900,15600
15100 FOR N=0 TO 9:PLOT 0,N:DRAWTO 7,N:NEX
      T N:FOR N=0 TO 2:PLOT 7,N:DRAWTO 19,N:NEXT
      N:FOR N=7 TO 9:PLOT 12,N
15110 DRAWTO 19,N:NEXT N:RETURN
15200 FOR N=0 TO 9:PLOT 12,N:DRAWTO 19,N:N
      EXT N:FOR N=0 TO 2:PLOT 0,N:DRAWTO 11,N:NE
      XT N
15210 FOR N=7 TO 9:PLOT 0,N:DRAWTO 7,N:NEX
      T N:RETURN
15300 FOR N=0 TO 9:PLOT 0,N:DRAWTO 7,N:NEX
      T N:FOR N=0 TO 2:PLOT 12,N:DRAWTO 19,N:NEX
      T N
15310 FOR N=7 TO 9:PLOT 8,N:DRAWTO 19,N:NE
      XT N:RETURN
15400 FOR N=0 TO 9:PLOT 12,N:DRAWTO 19,N:N
      EXT N:FOR N=0 TO 2:PLOT 0,N:DRAWTO 7,N:NEX
      T N
15410 FOR N=7 TO 9:PLOT 0,N:DRAWTO 12,N:NE
      XT N:RETURN
15500 FOR N=0 TO 2:PLOT 0,N:DRAWTO 19,N:NE
      XT N:FOR N=7 TO 9:PLOT 0,N:DRAWTO 7,N:PLOT
      12,N:DRAWTO 19,N:NEXT N
15510 RETURN
15600 ON INT(RND(0)*2)+1 GOTO 15605,15650
15605 FOR N=0 TO 2:PLOT 0,N:DRAWTO 2,N:PLO
      T 17,N:DRAWTO 19,N:PLOT 0,N+7:DRAWTO 2,N+7
15610 PLOT 17,N+7:DRAWTO 19,N+7:NEXT N:PLO
      T 3,0:DRAWTO 16,0:PLOT 3,9:DRAWTO 16,9:PLO
      T 5,3:DRAWTO 5,6
15620 PLOT 14,3:DRAWTO 14,6:PLOT 8,1:DRAWT
      O 8,3:PLOT 11,1:DRAWTO 11,3:PLOT 8,6:DRAWT
      O 8,8:PLOT 11,6:DRAWTO 11,8
15630 IF SUR=6 THEN AX=0:AY=0:CRX=125:CRY=
      158:RETURN
15640 CRX=0:CRY=0:AX=125:AY=105:RETURN
15650 PLOT 0,2:DRAWTO 0,0:DRAWTO 19,0:DRAW
      TO 19,2:PLOT 0,7:DRAWTO 0,9:DRAWTO 19,9:DR
      AWTO 19,7
15660 PLOT 3,3:DRAWTO 3,8:PLOT 6,3:DRAWTO
      6,6:PLOT 9,1:PLOT 9,5:DRAWTO 9,8:PLOT 12,1
      :DRAWTO 12,4
15670 PLOT 12,8:DRAWTO 13,4:PLOT 13,8:PLOT 1
      6,3:DRAWTO 16,6
15680 IF SUR=6 THEN AX=0:AY=0:CRX=133:CRY=
      158:RETURN
15690 CRX=0:CRY=0:AX=125:AY=105:RETURN
```

```
15700 FOR N=7 TO 9:PLOT 0,N:DRAWTO 19,N:NE
      XT N:FOR N=0 TO 2:PLOT 0,N:DRAWTO 7,N:PLOT
      12,N:DRAWTO 19,N:NEXT N
15710 RETURN
15800 FOR N=0 TO 9:PLOT 12,N:DRAWTO 19,N:N
      EXT N:FOR N=0 TO 2:PLOT 0,N:DRAWTO 7,N:NEX
      T N
15810 FOR N=7 TO 9:PLOT 0,N:DRAWTO 7,N:NEX
      T N:RETURN
15900 FOR N=0 TO 9:PLOT 0,N:DRAWTO 7,N:NEX
      T N:FOR N=0 TO 2:PLOT 12,N:DRAWTO 19,N:NEX
      T N
15910 FOR N=7 TO 9:PLOT 12,N:DRAWTO 19,N:N
      EXT N:RETURN
19999 REM MAIN TITLE SCREEN
20000 GRAPHICS 2+16:POKE 708,250:POKE 709,
      15:POKE 710,58:POKE 711,122:POKE 756,CHSET
      :POKE 559,62:S=0
20005 SOUND 0,200,10,10:SOUND 1,99,8,10:PO
      KE 704,47:POKE 705,54:POKE 706,202:POKE 70
      7,246
20010 POSITION 2,0:? #6;"RAMPANT SQUASHY"
      :POSITION 7,1:? #6;"THINGS":POSITION 5,3:?
       #6;"crystal"
20020 POSITION 6,4:? #6;"strawberry"
20030 POSITION 5,5:? #6;"apple"
20040 POSITION 6,6:? #6;"potato"
20050 POSITION 1,9:? #6;"score:";SC
20060 POSITION 13,9:? #6;"hi:";HI
20070 POSITION 4,10:? #6;"press START"
20080 FOR F=0 TO 3:X=USR(1568,0,70,80,F+12
      ):X=USR(1568,1,80,98,F):X=USR(1568,2,70,11
      3,F+4):X=USR(1568,3,80,132,F+8)
20090 IF PEEK(53279)=6 THEN SOUND 0,0,0,0:
      SOUND 1,0,0,0:RETURN
20095 S=S+1:POKE 53768,S:IF S>254 THEN S=0
20100 FOR Z=1 TO 10:NEXT Z:NEXT F:GOTO 200
      80
21000 REM DEFINE MAZE
21010 RESTORE 21500:FOR A=1 TO 8:FOR B=1 T
      O 8:READ C:MAZE(B,A)=C:NEXT B:NEXT A:RETUR
      N
21499 REM MAZE DATA
21500 DATA 1,6,6,5,6,10,6,2
21510 DATA 9,6,2,3,6,6,6,8
21520 DATA 9,6,7,6,6,5,6,4
21530 DATA 3,5,6,10,6,7,5,2
21540 DATA 1,7,6,6,6,6,7,8
21550 DATA 9,6,6,6,6,5,6,4
21560 DATA 9,6,5,10,6,7,6,2
21570 DATA 3,10,7,6,6,6,6,4
24999 REM 1ST TITLE SCREEN
25000 GRAPHICS 1+16:POKE 708,250:POKE 709,
      15:POKE 710,58:DL=PEEK(741)+PEEK(742)*256:
      POKE DL+18,7:POKE DL+19,7
25010 POSITION 2,3:? #6;"PARAMOUNTAIN":POS
      ITION 8,5:? #6;"SOFTWARE":POSITION 5,7:? #
      6;"presents"
25020 POSITION 3,12:? #6;"RAMPANT SQUASHY"
      :POSITION 7,13:? #6;"THINGS":POSITION 9,16
      :? #6;"by"
25030 POSITION 2,19:? #6;"michael kempster
      "
30000 REM INITIALISE - PLAYER ANIMATOR
            PAGE 6 - ISSUE 13
30005 SOUND 0,200,10,5:SOUND 1,99,12,5
```

```
30010 CHSET=PEEK(106)-8:CH=CHSET*256:DIM M
$(32),CHAR$(40),MAZE(8,8):RESTORE 30500:FO
R I=1 TO 32:READ A
30020 M$(I,I)=CHR$(A):NEXT I:A=USR(ADR(M$)
,57344,CH):CHAR$="ABCDEFGHIJKLMNOPQRSTUVWY
0123456789"
30025 SOUND 1,200,12,8
30030 FOR I=1 TO LEN(CHAR$):CHPOS=CH+(ASC(
CHAR$(I))-32)*8:FOR J=0 TO 7:READ K:POKE C
HPOS+J,K:NEXT J:NEXT I
30040 POKE 106,PEEK(106)-16:PMST=PEEK(106)
:F=PMST*256:RESTORE 30100:POKE 756,CHSET:S
OUND 1,100,12,8
30050 FOR A=1536 TO 1758:READ B:POKE A,B:N
EXT A:POKE 559,62:POKE 54279,PMST:FOR Q=0
TO 3:POKE 53248+Q,0:NEXT Q
30055 POKE 53277,3:X=USR(1536,PMST):RESTOR
E 30200
30060 SOUND 1,200,2,8:FOR A=0 TO 318 STEP
2:READ B:POKE F+A,B:POKE F+A+1,B:NEXT A
30070 GOSUB 21000:RETURN
30099 REM DATA FOR M/C
30100 DATA 104,104,104,141,218,6,24,105,4,
141,219,6,169,0,162,3,157,200,6,202,16,250
,169,7,162
30110 DATA 6,160,67,32,92,228,96,169,1,141
,220,6,104,104,104,170,104,104,157,208,6,1
04,104,157,212
30120 DATA 6,104,104,157,204,6,169,1,157,2
00,6,169,0,141,220,6,96,173,220,6,240,3,76
,98,228
30130 DATA 162,3,189,200,6,208,6,202,16,24
8,76,98,228,142,216,6,169,0,157,200,6,141,
221,6,189
30140 DATA 204,6,201,16,16,21,189,204,6,10
,10,10,10,133,205,173,221,6,24,109,218,6,1
33,206,76
30150 DATA 152,6,173,221,6,24,105,1,141,22
1,6,189,204,6,56,233,16,157,204,6,201,16,4
8,213,76
30160 DATA 127,6,173,219,6,24,109,216,6,13
3,204,169,0,133,203,160,255,145,203,136,20
8,251,189,212,6
30170 DATA 133,203,160,0,177,205,145,203,2
00,192,16,208,247,174,216,6,189,208,6,157,
0,208,24,144,131
30180 DATA 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
,0,0,0,0,0,0,0
30190 DATA 192,208,224,240,0,0,0,0,0,0,0
30199 REM DATA FOR P/M GRAPHICS
30200 DATA 36,24,126,219,126,60,24,0
30210 DATA 36,24,126,219,126,60,0,0
30220 DATA 0,60,126,219,126,24,0,0
30230 DATA 36,24,126,219,126,60,0,0
30240 DATA 56,16,56,124,214,254,68,56
30250 DATA 0,16,56,124,214,254,108,56
30260 DATA 0,0,56,124,214,254,124,56
30270 DATA 0,16,56,124,214,254,108,56
30280 DATA 60,126,90,255,255,255,126,60
30290 DATA 60,126,90,255,255,195,126,60
30300 DATA 60,126,90,255,255,195,66,60
30310 DATA 60,126,90,255,255,195,126,60
30320 DATA 64,228,78,4,64,228,78,4
30330 DATA 8,92,232,64,8,92,232,64
30340 DATA 16,56,80,228,78,20,56,16
30350 DATA 32,112,36,78,228,72,28,8
30360 DATA 60,219,60,24,126,90,24,60
30370 DATA 60,90,60,24,126,24,24,60
30380 DATA 60,24,60,90,126,24,60,0
30390 DATA 60,90,60,24,126,24,24,60
30499 REM DATA FOR M/C
30500 DATA 104,104,133,213,104,133,212,104
,133,215,104,133,214,162,4,160,0,177,212,1
45,214,200,208,249,230,213
30510 DATA 230,215,202,208,240,96
30519 REM DATA FOR CHARACTERS
30520 DATA 0,28,62,119,127,119,119,119
30530 DATA 0,126,115,126,127,115,127,126
30540 DATA 0,63,112,112,112,127,127,63
30545 DATA 126,126,126,0,231,231,231,0
30550 DATA 0,127,112,124,112,127,127,127
30555 DATA 0,127,112,124,112,112,112,112
30560 DATA 0,63,112,112,119,115,127,62
30570 DATA 0,119,119,127,127,127,119,119
30580 DATA 0,127,127,0,127,127,127,127
30585 DATA 36,102,195,24,24,195,102,36
30590 DATA 0,115,119,126,124,127,119,115
30600 DATA 0,96,96,96,96,127,127,127
30610 DATA 0,99,127,127,127,107,99,99
30620 DATA 0,115,123,127,127,119,115,115
30630 DATA 0,62,119,119,119,127,127,62
30640 DATA 0,126,115,127,126,112,112,112
30650 DATA 0,62,119,119,119,127,124,59
30660 DATA 0,126,115,127,126,119,119,119
30670 DATA 0,63,127,126,126,7,127,126
30680 DATA 0,127,127,62,62,62,62,62
30690 DATA 0,119,119,119,119,127,127,62
30700 DATA 0,119,119,119,119,127,62,28
30710 DATA 0,99,99,107,127,127,127,99
30720 DATA 0,119,119,127,28,28,62,62
30730 DATA 0,62,119,119,127,127,127,62
30740 DATA 0,28,60,28,28,28,127,127
30750 DATA 0,60,126,7,14,28,127,127
30760 DATA 0,62,127,7,31,7,127,62
30770 DATA 0,119,119,119,127,127,7,7
30780 DATA 0,127,127,112,126,7,127,126
30790 DATA 0,28,56,112,126,119,127,62
30800 DATA 0,127,127,7,14,28,56,48
30810 DATA 0,62,119,62,119,119,127,62
30820 DATA 0,62,127,119,63,14,28,56
30830 REM DONE!!!!!
```

Rampant Squashy Things

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GALEX-VADERS

Galex-Vaders runs on any BBC micro with 32K or Electron. If you think it's another Space Invaders game with 48 marching invaders, 3 kinds of invaders, mystery ship and bombs that erode your defences!!...

Well you are right but you've got all that and much more. In fact these invaders get tired of marching side to side and suddenly leave formation to furiously attack your laser base. So what you've got is a good mix of "Galax- ians" and "Space Invaders" with all the action you can expect from a machine-code arcade game.

As you see the Game is in two parts: Program 1 contains all the machine code and I advise you to type it carefully and save it before you run it otherwise all your work can be lost. Then type Program 2 and save it just after Program 1. To play the game just enter CHAIN" and that's all.

```
10 REM ===============
20 REM = Galexvaders =
30 REM =     by      =
40 REM =   C.Rondao  =
50 REM = Lisb/Dez/84 =
60 REM ===============
70 MODE7
80 PROCTEXT
90 ML=&79:MH=&7A:CONT=&7B:LP=&7C:RET=&7D
100 LIV=19500
110 LIV0=LIV+1:MYT=LIV0+1:MYL=MYT+1:MYH=MYL+1:SHIPDEA
D=MYH+1:RE=SHIPDEAD+1:CSHOT=RE+1:GAL=CSHOT+1:GAH=GAL+4:
SL=GAH+4:DRMISS=SL+4:AS=DRMISS+8:DRMYST=AS+8:TPEXP=DRMY
ST+32
120 SHOT=TPEXP+32:NINV=SHOT+1:LIDEAD=NINV+1:SCR=LIDEA
D+1:FPL=SCR+1:FPH=FPL+1:CONT1=FPH+1:NAV=CONT1+1:THEXP=N
AV+16:INV=THEXP+16:INV0=INV+16::INV10=INV0+16:INV21=INV
```

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```
1370 LDY#15
1380 .P4
1390 LDA INV21,Y:STA INV,Y:LDA INV20,Y:STA INV0,Y:DEY:
BPL P4
1400  JMP L7
1410 .P5
1420 LDY#15
1430 .P6
1440 LDA INV30,Y:STA INV,Y:LDA INV31,Y:STA INV0,Y:DEY:
BPL P6
1450  JMP L7
1460 .RTS
1470 .DRFENSE
1480 LDY#47
1490 .Q0
1500 LDA FENSE,Y:STA(&70),Y:DEY:BPL Q0
1510 LDX#0
1520 .Q3
1530 CLC:LDA&70:ADC#64:STA&70:LDA&71:ADC#1:STA&71
1540 LDY#47
1550 .Q1
1560 LDA#255:STA(&70),Y:DEY:BPL Q1
1570 INX:CPX#3:BNE Q3
1580 RTS
1590 .MR
1600 LDA CONT1:CMP#32:BEQ S2
1610 LDY#15
1620 .S0
1630 LDA#0:STA(&80),Y:DEY:BPL S0
1640 CLC:LDA&80:ADC#8:STA&80:LDA&81:ADC#0:STA&81
1650  LDY#9:LDA(&80),Y:BNE JMORT
1660 LDY#15
1670 .S1
1680 LDA NAV,Y:STA(&80),Y:DEY:BPL S1
1690 INC CONT1
1700 .S2
1710 RTS
1720  .JMORT
1730  LDA#1:STA SHIPDEAD:RTS
1740 .MLE
1750 LDA CONT1:BEQ S5
1760 LDY#15
1770 .S3
1780 LDA#0:STA(&80),Y:DEY:BPL S3
1790 SEC:LDA&80:SBC#8:STA&80:LDA&81:SBC#0:STA&81
1800  LDY#1:LDA(&80),Y:BNE JMORT
1810 LDY#15
1820 .S4
1830 LDA NAV,Y:STA(&80),Y:DEY:BPL S4
1840 DEC CONT1
1850 .S5
1860 RTS
1870 .FIRE
1880 LDX#2
1890 .TAR0
1900 LDA FE,X:BNE TAR1
1910 SEC:LDA&80:SBC#64:STA FIL,X
1920 LDA&81:SBC#1:STA FIH,X
1930 LDA#1:STA FE,X:LDA#0:STA SHOT:RTS
1940 .TAR1
1950 DEX:BPL TAR0
1960 LDA#1:STA SHOT
1970 RTS
1980 .OBACK
1990 SEC:LDA&82:SBC#8:STA&82
2000 LDA&83:SBC#0:STA&83
2010 RTS
2020 .W5
2030 LDA#3:STA SCR:LDA#0:STA SHOT:RTS
2040 .W6
2050 JSR OBACK:JMP W5
```

```
2060 .W7
2070 LDA#2:STA SCR:LDA#0:STA SHOT:RTS
2080 .W8
2090 JSR OBACK:JMP W7
2100 .W9
2110 LDA#1:STA SCR:LDA#0:STA SHOT:RTS
2120 .WT0
2130 JSR OBACK:JMP W9
2140 .WR3
2150 CMP#255:BEQ W4
2160  LDA#1:STA LIDEAD:LDA#0:STA FE,X:STA SHOT
2170 LDY#0:LDA(&82),Y:CMP#204:BEQ W5:CMP#51:BEQ W6:CMP
#68:BEQ W7:CMP#34:BEQ W8:CMP#224:BEQ W9:CMP#112:BEQ WT0

2180  LDA#5:STA SCR:RTS
2190 .W4
2200 LDY#7
2210 .V0
2220 LDA DDEF,Y:STA(&82),Y:DEY:BPL V0
2230  LDA#0:STA FE,X:STA SHOT
2240 LDA#250:STA PORT:JSR DELAY:JSR DELAY:JSR DELAY
2250  RTS
2260 .FIRE1
2270 LDX#2
2280 .TAR2
2290 LDA FE,X:BEQ TAR5
2300 LDA FIL,X:STA&82
2310 LDA FIH,X:STA&83
2320 LDY#7
2330 .TAR3
2340 LDA#0:STA(&82),Y:DEY:BPL TAR3
2350 SEC:LDA&82:SBC#64:STA&82
2360 LDA&83:SBC#1:STA&83
2370 LDY#0:LDA(&82),Y:BEQ WRI
2380  JMP WR3
2390  .WRI
2400 LDA&83:CMP#&5C:BCS V2
2410 LDA#0:STA FE,X:STA SHOT:JMP TAR5
2420 .V2
2430 LDY#7
2440 .TAR4
2450 LDA#16:STA(&82),Y:DEY:BPL TAR4
2460 LDA&82:STA FIL,X
2470 LDA&83:STA FIH,X
2480 .TAR5
2490 DEX:BPL TAR2
2500 RTS
2510 .DREXP
2520  LDA SCR:CMP#5:BEQ X1
2530  INC NAL:LDA NAL:CMP#30:BNE RPD
2540  LDA#0:STA ROF
2550 .RPD
2560 LDY#15
2570 .VT1
2580 LDA THEXP,Y:STA(&82),Y:DEY:BPL VT1
2590 RTS
2600 .X1
2610 LDY#31
2620  .X2
2630  LDA TPEXP,Y:STA(&84),Y:DEY:BPL X2
2640 LDA#1:STA LIV:RTS
2650 .EFAEXP
2660  LDA SCR:CMP#5:BEQ X3
2670 LDY#15
2680 .V01
2690 LDA#0:STA(&82),Y:DEY:BPL V01
2700 RTS
2710 .X3
2720 LDY#31
2730 .X4
2740  LDA#0:STA(&84),Y:DEY:BPL X4
2750  RTS
2760 .X5 RTS
2770 .COALIEN
2780  LDA SCR:CMP#5:BEQ X5
2790 LDX#0
2800 .VT2
2810  LDA D0,X:BNE ZK7:LDA D1,X:BEQ JK7
2820  .ZK7
2830 LDA IPL,X:STA&70:LDA IPH,X:STA&71
2840 LDY#0:LDA(&70),Y:CMP#33:BEQ V4
```

```
2850 .JK7
2860 INX:CPX#48:BNE VT2
2870 RTS
2880 .V4
2890 LDA#0:STA D0,X:STA D1,X
2900  LDX#0
2910  .VT6
2920  LDA D0,X:BNE VT7:LDA D1,X:BNE VT7:INX:CPX#48:BNE
VT6
2930 .V5
2940 LDX#0
2950 .V6
2960 LDA#1:STA D0,X:LDA#0:STA D1,X:INX:CPX#48:BNE V6
2970  LDA FPH:CMP#&65:BCS NDANCE
2980 CLC:LDA FPL:ADC#64:STA FPL:LDAFPH:ADC#1:STA FPH

2990  .NDANCE
3000 LDA#1:STA ROF:LDA#0:STA NAL
3010  LDA#4:STA CONT:LDA#8:STA ML:LDA#0:STA MH
3020  JSR DRAGAIN
3030  .VT7
3040 RTS
3050 .DOG
3060 LDY#0
3070 .DG0
3080 LDA SL,Y:BNE DG2
3090 SEC:LDA&70:SBCML:STA GAL,Y:LDA&71:SBC MH:STA GAH,
Y
3100 LDA#1:STA SL,Y
3110 RTS
3120 .DG2
3130 INY:CPY#4:BNE DG0
3140 RTS
3150 .BULLET
3160  LDA CSHOT:BEQ BT1
3170  LDA#6:STA PORT:JSR DELAY
3180  DEC CSHOT:RTS
3190  .BT1
3200 LDA#1:STA CSHOT
3210 LDX#0
3220 .BL0
3230 LDA GAL,X:STA&70:LDA GAH,X:STA&71
3240 LDA SL,X:BEQ BL6
3250 LDY#7
3260 .BL1
3270 LDA#0:STA(&70),Y:DEY:BPL BL1
3280 CLC:LDA&70:ADC#64:STA&70:LDA&71:ADC#1:STA&71
3290  LDA&71:CMP#&80:BCS BL06
3300  LDY#0:LDA(&70),Y:CMP#255:BEQ BL3:CMP#1:BEQ BL5:C
MP#8:BEQ BL5
3310 LDY#7
3320 .BL2
3330 LDA AS,Y:STA(&70),Y:DEY:BPL BL2
3340 LDA&70:STA GAL,X:LDA&71:STA GAH,X
3350 .BL6
3360 INX:CPX#4:BNE BL0
3370 RTS
3380 .BL3
3390 LDY#7
3400 .BL4
3410 LDA DDEF,Y:STA(&70),Y:DEY:BPL BL4
3420 .BL06
3430 LDA#0:STA SL,X
3440 INX:CPX#4:BNE BL0
3450 RTS
3460 .BL5
3470 LDA#0:STA SL,X
3480 LDA#1:STA SHIPDEAD
3490 RTS
3500 .MYC
3510 LDA LIV:BEQ MYST
3520 JSR ALE:CMP#100:BCC CY0
3530 RTS
3540 .CY0
3550 JSR ALE:CMP#10:BEQ CY1
3560 RTS
3570 .CY1
3580 LDA#0:STA LIV
3590  LDA#8:STA MYL:LDA#0:STAMYH
3600 LDA#&40:STA&84:LDA#&5C:STA&85:RTS
3610 .CHOICE
```

```
3620 LDA MYL:CMP#248:BEQ MY1
3630 .MY2
3640 LDA#248:STA MYL:LDA#255:STA MYH:RTS
3650 .MY1
3660 LDA#8:STA MYL:LDA#0:STA MYH:RTS
3670 .MYST
3680 LDA MYT:BEQ MY0
3690  LDA#2:STA PORT:JSR DELAY
3700 DEC MYT:RTS
3710 .MY0
3720 LDA#10:STA MYT
3730 JSR ALE:CMP#10:BCS MRY
3740  JSR CHOICE
3750 .MRY
3760 LDY#31
3770 .MY3
3780 LDA#0:STA(&84),Y:DEY:BPL MY3
3790 CLC:LDA&84:ADC MYL:STA&84:LDA&85:ADC MYH:STA &85
3800 LDA&84:CMP#8:BCC M1:CMP#232:BCS M2
3810 .NOW
3820 LDY#31
3830 .MY4
3840 LDA DRMYST,Y:STA(&84),Y:DEY:BPL MY4
3850 .EMY
3860 RTS
3870 .M1
3880  CLC:LDA&84:ADC#8:STA&84:LDA&85:ADC#0:STA&85
3890  JMP NOW
3900  .M2
3910  SEC:LDA&84:SBC#8:STA&84:LDA&85:SBC#0:STA&85
3920  JMP NOW
3930 .ALE
3940  TXA:STA RE
3950 LDY#8
3960 .BG
3970 CLC:LDA &75+3
3980 BPL ZB
3990 LDX#2
4000 .LI
4010 LDA &75,X:EOR &72,X:STA &75,X
4020 DEX:BPL LI
4030 SEC
4040 .ZB
4050 ROL &75:ROL &75+1:ROL &75+2:ROL &75+3
4060 DEY:BNE BG
4070  LDA RE:TAX
4080 LDA &75+3
4090 .SIL
4100 RTS
4110 .MISSIL
4120  LDA LIV0:BNE SIL1
4130 LDA LIV:BNE SIL
4140 JSR ALE:CMP#3:BCC SIL0
4150 RTS
4160 .SIL0
4170 CLC:LDA&84:ADC#80:STA&86:LDA&85:ADC#1:STA&87
4180 LDA#1:STA LIV0
4190 RTS
4200 .SIL1
4210 LDY#7
4220 .SIL2
4230 LDA#0:STA(&86),Y:DEY:BPL SIL2
4240 CLC:LDA&86:ADC#64:STA&86:LDA&87:ADC#1:STA&87
4250 LDY#0:LDA(&86),Y:CMP#1:BEQ SIL5:CMP#8:BEQ SIL5:CM
P#255:BEQ SUN:CMP#8:BNE SIL6
4260 LDA&87:CMP#&7F:BCS SIL6
```

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```
4270 .SUN                                    4980 RTS
4280 LDY#7                                   4990 .GOOD
4290 .SIL3                                   5000 LDA ROF:BNE MT12
4300 LDA DRMISS,Y:STA(&86),Y:DEY:BPL SIL3    5010 JSR ALE:CMP#3:BCC MT11
4310 RTS                                     5020 RTS
4320 .SIL5                                   5030 .MT11
4330 LDA#1:STA SHIPDEAD                      5040 LDX#0
4340 .SIL6                                   5050 .MT10
4350 LDA#0:STA LIV0                          5060 LDA D0,X:BEQ MT9
4360 RTS                                     5070 JSR ALE:CMP#20:BCS MT9
4370 .DSHIP                                  5080 LDA#184:STA COL,X
4380 LDY#15                                  5090 LDA#254:STA COH,X
4390 .DS0                                    5100 LDA#0:STA D0,X:LDA IPL,X:STA70:LDAIPH,X:STA&71
4400 LDA THEXP,Y:STA(&80),Y:DEY:BPL DS0      5110  LDY#0:LDA(&70),Y:CMP#224:BEQ PT0:CMP#68:BEQ PT1
4410 RTS                                     5120  LDA#16:STA D1,X:RTS
4420 .EFSHIP                                 5130 .PT0 LDA#48:STA D1,X:RTS
4430 LDY#15                                  5140 .PT1 LDA#32:STA D1,X:RTS
4440 .EF2                                    5150 RTS
4450 LDA#0:STA(&80),Y:DEY:BPL EF2            5160 .MT9
4460 LDX#0                                   5170 INX:CPX#48:BNE MT10
4470 .JK                                     5180 .MT12
4480 LDA SL,X:BEQ JK3                        5190 RTS
4490 LDA GAL,X:STA70:LDA GAH,X:STA&71        5200 .MOV48
4500 LDY#7                                   5210 LDA ROF1:BEQ TTI
4510 .JK1                                    5220 DEC ROF1:RTS
4520 LDA#0:STA(&70),Y:DEY:BPL JK1            5230 .TTI
4530 .JK3                                    5240 LDA#3:STA ROF1
4540 LDA#0:STA SL,X                          5250 LDX#0
4550 INX:CPX#4:BNE JK                        5260 .MT13
4560 LDX#0                                   5270 LDA D1,X:BEQ MT18
4570 .JK30                                   5280 LDA IPL,X:STA70:LDA IPH,X:STA&71
4580 LDA FE,X:BEQ JK40                       5290 LDY#15
4590 LDA FIL,X:STA70:LDA FIH,X:STA&71        5300 .MT14
4600 LDY#7                                   5310 LDA#0:STA(&70),Y:DEY:BPL MT14
4610 .JK4                                    5320  JSR ALE:CMP#9:BCS TICO
4620 LDA#0:STA(&70),Y:DEY:BPL JK4            5330  JSR TEST3
4630 LDA#0:STA FE,X:STA SHOT                 5340 .TICO
4640 .JK40                                   5350 .MT15
4650 INX:CPX#3:BNE JK30                      5360 CLC:LDA&70:ADC COL,X:STA&70
4660 .JK5                                    5370 LDA&71:ADC COH,X:STA&71
4670 LDA LIV0:BEQ JK8                        5380 LDA&71:CMP#&5B:BCC TEST3:CMP#&7B:BCC MOTT
4680 LDY#7                                   5390 SEC:LDA&70:SBC#&00:STA&70
4690 .JK6                                    5400 LDA&71:SBC#&9:STA&71
4700 LDA#0:STA(&86),Y:DEY:BPL JK6            5410 LDA#72:STA COL,X:LDA#1:STA COH,X
4710 LDA#0:STA LIV0                          5420 .MOTT
4720 .JK8                                    5430  LDA GA0:ADC D1,X:STA&8E
4730 LDA#&50:STA&80:LDA#&7F:STA&81           5440  LDA GA1:STA&8F
4740 LDY#15                                  5450 LDY#15
4750 .EF0                                    5460 .MT16
4760 LDA NAV,Y:STA(&80),Y:DEY:BPL EF0        5470 LDA(&8E),Y:STA(&70),Y:DEY:BPL MT16
4770  LDA#0:STA SHIPDEAD                     5480 JSR ALE:CMP#50:BCS MT17
4780  LDA#16:STA CONT1                       5490 JSR D08
4790 RTS                                     5500 .MT17
4800 .DELAY                                  5510 LDA&70:STA IPL,X:LDA&71:STA IPH,X
4810 LDXPORT                                 5520 .MT18
4820 .E0                                     5530 INX:CPX#48:BNE MT19
4830 LDY#20                                  5540 RTS
4840 .E1                                     5550 .MT19 JMP MT13
4850 NOP:NOP:DEY:BNE E1                      5560 .TEST3
4860 DEX:BNE E0                              5570 JSR ALE:CMP#230:BCS TEST6:CMP#130:BCS TEST5
4870 RTS                                     5580 LDA#56:STA COL,X:LDA#1:STA COH,X
4880 .PUF                                    5590 RTS
4890 LDA#&40:STA&70:LDA#&67:STA&71           5600 .TEST6
4900 LDX#13                                  5610 LDA#192:STA COL,X:LDA#254:STA COH,X
4910 .PUF0                                   5620 RTS
4920 SEC:LDA&70:SBC#16:STA&7E:LDA&71:SBC#0:STA&7F  5630 .TEST5
4930 LDY#16                                  5640 LDA#72:STA COL,X:LDA#1:STA COH,X
4940 .PUF1                                   5650 RTS
4950 LDA(&70),Y:STA(&7E),Y:DEY:BNE PUF1      5660 ]NEXT I%
4960 CLC:LDA&70:ADC#16:STA&70:LDA&71:ADC#0:STA&71  5670  ?&72=&53:?&73=&B5:?&74=&76:!&75=RND
4970 DEX:BNE PUF0                            5680  ?GA0=&C7:?GA1=&4C
                                             5690  PROCTEXT
                                             5700 CHAIN"VADERS2"
                                             5710 DEFPROCTEXT
                                             5720 PRINTTAB(13,4);CHR$(129);"ESMIFRASOFT"
                                             5730  PRINTTAB(15,8);CHR$(132)"PRESENTS"
                                             5740 PRINTTAB(11,13);CHR$(141);CHR$(133);CHR$(136);"GA
                                          LEX-VADERS"
                                             5750  PRINTTAB(11,14);CHR$(141);CHR$(133);CHR$(136);"GA
                                          LEX-VADERS"
                                             5760 ENDPROC
```

GALEX-VADERS

```
10   REM ==============
20   REM = Galexvaders =
30   REM =     part2    =
40   REM ==============
50   SL=&4C3C:FPL=&4C94:FPH=&4C95:SHOT=&4C90:LIDEAD=&4C92:
SHIPDEAD=&4C31:START=&4F4C:DRAGAIN=&4FBE:PUF=&563B:DRFENSE=&
512B:FIRE=&51B9:FIRE1=&5278
60   MR=&5153:MLE=&518A:MOVALL=&5048:MYC=&5453:MISSIL=&55
33:BULLET=&53C6:SCR=&4C93:DSHIP=&559E:EFSHIP=&55A9:DREXP=&52
D0:EFAEXP=&5301:COALIEN=&531D:GOOD=&566C:MOV48=&56C5:FE=&4E9
5
70   DIM NIX(10),NI$(10)
80   MODE5
90   VDU23;8202;0;0;0;
100  ENVELOPE1,0,-8,-3,122,227,245,194,125,-76,-1,-6,126,1
26
110  ENVELOPE2,129,0,0,0,100,0,0,127,-2,0,-1,126,120
120  VDU19,3,4,0,0,0,19,2,2,0,0,0
130  PROCFIRST
140  REPEAT
150   COLOUR 1
160   FOR A=1 TO 94:READ B$:PRINTTAB(15,12);B$:FOR Q=1 TO 3
00:NEXT:CALL PUF
170   IF INKEY(-82) A=95
180   NEXT
190   RESTORE 210
200  UNTIL INKEY(-82)
210  DATA B,B,C, ,I,N,V,A,D,E,R,S, , ,b,y, ,C,.,R,o,n,d,a,
o, ,&, ,A,.,O,t,e,r,o, , ,Z,-,1,e,f,t, ,X,-,r,i,g,h,t, ,S,p,
a,c,e,-,f,i,r,e, , ,B,a,s,e, ,B,o,n,u,s, ,a,t, ,8,0,0,0, , ,
S,-,s,t,a,r,t, , , ,
220   HIX=0:D=0
230   *FX11,0
240  FOR A=0 TO 3:?(SL+A)=0:NEXT:?&7D=20
250   FOR A=FE TO FE+2:?A=0:NEXT
260   VDU19,3,4,0,0,0,19,2,2,0,0,0,23;8202;0;0;0;
270   CLS
280   SCX=0:LIX=3:JX=0
290   PROCSCORE:PROCTI:PROCLI
300   PROCGOOD
310  CALL START
320  REPEAT
330  CALL MOVALL
340   CALL GOOD
350   CALL MOV48
360   CALL MYC
370   CALL MISSIL
380  IF INKEY(-67)CALL MR
390  IF INKEY(-98)CALL MLE
400  XX=INKEY(0)
410  IF XX=32 AND ?SHOT=0 SOUND 1,1,1,2:CALL FIRE
420   CALL FIRE1
430   CALL BULLET
440   IF ?LIDEAD=1 PROCSC
450  IF ?SHIPDEAD=1 PROCDEAD
460  UNTIL LIX=0
470  *FX15,1
480  MODE7
490  IF D=1 GOTO 580
500  RESTORE 570
510  A=5000
520  FOR I=1 TO 10
530  A=A-RND(500)
540  READ B$:NI$(I)=B$:NIX(I)=A
550  NEXT
560  D=1
570  DATA Carlos Rondao,Ana Otero,Paula Rondao,Sergio Tavar
es,Ze V. Matos,J.Nelas,Pedro Jordao,Jose Afonso,Jose Rodrigu
es,Joao Comparada
580  PROCHI
590  PROCHITABLE
600  HIX=NIX(1)
610  IF S$="Y" MODE5:GOTO 240
620  *FX12,0
630  END
640  DEFPROCSC
650  CALL DREXP
660  SCX=SCX+10*?SCR:PROCSCORE
670  IF SCX>8000 AND JX=0 SOUND 3,-15,200,5:' 'X=LIX+1:PROC
LI:JX=1
680  IF ?SCR=5 SOUND&0010,2,4,2
690  ?LIDEAD=0
700  CALL COALIEN
710  CALL EFAEXP
720  ENDPROC
```

```
730  DEFPROCSCORE
740  COLOUR1
750  PRINTTAB(1,1)LEFT$("00000",5-LEN(STR$SCX));SCX;
760  ENDPROC
770  DEFPROCTI
780  COLOUR1
790  PRINTTAB(14,1)LEFT$("00000",5-LEN(STR$HIX));HIX;
800  ENDPROC
810  DEFPROCDEAD
820  CALL DSHIP
830  LIX=LIX-1
840  PROCLI
850  SOUND&0010,2,6,20
860   FOR Q=0 TO500:NEXT
870  CALL EFSHIP
880   PROCGROW
890   ?SHIPDEAD=0
900  ENDPROC
910  DEFPROCLI
920  COLOUR 3:PRINTTAB(9,1)LEFT$("00",2-LEN(STR$LIX));LIX;
930  ENDPROC
940  DEFPROCFIRST
950  VX=30
960  FOR C=6 TO 15 STEP 4:COLOUR RND(2)+1:PRINTTAB(6,C);VX;
"Points"
970   VX=VX-10
980  NEXT
990  ?FPL=&60:?FPH=&5E
1000  CALL DRAGAIN
1010   PROCGOOD
1020  ENDPROC
1030  DEFPROCGOOD
1040  B=&48:?&70=&48
1050  FOR A=1 TO 4
1060  ?&71=&77
1070  IF A=4 ?&71=&78:?&70=&38
1080  CALL DRFENSE
1090  B=B+&50
1100  ?&70=B
1110  NEXT
1120  ENDPROC
1130  DEFPROCGROW
1140   IF LIX=0 ENDPROC
1150  COLOUR1:PRINTTAB(5,24);"Press 'A'"
1160  REPEAT S$=GET$: UNTIL S$="A"
1170  COLOUR0:PRINTTAB(5,24);"Press 'A'"
1180  ENDPROC
1190  DEFPROCHITABLE
1200   FOR A=0 TO 2 STEP 2:PRINTTAB(4,A);CHR$(129);"--------
---":NEXT
1210  PRINTTAB(4,1);CHR$(130);"Best Scores"
1220  I=0
1230  FOR A=3 TO 21 STEP 2
1240  I=I+1
1250  PRINTTAB(3,A);CHR$(131);I;".";TAB(6,A);CHR$(130);LEFT$
("00000",5-LEN(STR$NIX(I)))NIX(I);
1260  PRINTTAB(0,A+1);CHR$(129);NI$(I)
1270  NEXT
1280   PRINTTAB(4,24);CHR$(130);"Another Game ?"
1290  REPEAT:S$=GET$:UNTIL S$="Y" OR S$="N"
1300  ENDPROC
1310  DEFPROCHI
1320  I=0
1330  REPEAT
1340  I=I+1
1350  UNTIL NIX(I)<SCX OR I=10
1360  IF NIX(I)<SCX P=10:REPEAT:NIX(P)=NIX(P-1):NI$(P)=NI$(P
-1):P=P-1:UNTIL P=I-1 ELSE GOTO 1400
1370  NIX(I)=SCX
1380  INPUTTAB(1,18)"Your Name",NI$(I)
1390  HIX=NIX(1)
1400  CLS
1410  ENDPROC
```

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LITTLE BEE

By Richard Palmer

In this game you are a busy little bee collecting pollen. You must collect 20 pieces of pollen in the time given (3 minutes 20 seconds, 200 on your timer).

If you do not succeed in collecting 20 pieces of pollen or you get caught in a spiders web then a very angry spider will drag you away.

If you succeed in collecting 20 pieces of pollen the game moves to the next level and the next 20 pieces are harder to collect.

The game will carry on until your time reaches 200 or you get caught by the hungry spider.

The object of the game is to collect as many pieces of pollen as you can before the hazards of doom confine you to infinite darkness.

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```
0 PRINT"[]":POKE53280,6:POKE53281,6:PRINT"[]PLEASE WAIT."
1 PRINT"[]I AM SETTING THE GRAPHICS UP"
10 POKE52,48:POKE56,48:CLR
11 POKE56334,PEEK(56334)AND254
12 POKE1,PEEK(1)AND251
13 FORI=0TO511:POKEI+12288,PEEK(I+53248):NEXT
14 POKE1,PEEK(1)OR4
15 POKE56334,PEEK(56334)OR1
20 FORI=0TO511STEP8:A=12288+1+I:B=PEEK(A):POKEA,BAND4:NEXT
50 PC=49152
60 READCO:IFCO=-1THEN100
70 POKEPC,CO:PC=PC+1:GOTO60
100 PC=13312
110 READCO:IFCO=-1THEN200
120 POKEPC,CO:PC=PC+1:GOTO110
200 PC=12504
210 READCO:IFCO=-1THEN230
220 POKEPC,CO:PC=PC+1:GOTO210
230 GOTO30000
235 POKE53280,6:POKE53281,6:PRINT"[]":GOSUB20000
300 V=53248:POKEV+21,135:POKEV+28,1:POKEV,150:POKEV+1,150:POKE2047,216:SC=0:L=0
305 POKEV+46,7:POKEV+37,0:POKEV+38,7:POKEV+39,0:POKEV+40,1:POKE2041,212
306 POKEV+23,2:POKEV+29,2:POKEV+41,0
307 POKE54296,15:POKE54295,0:S=30:U=30:SQ=13
310 POKE53270,24:POKE53272,28:POKE53232,13:POKE53283,2
```

```
315 GOSUB3000:GOSUB5000
320 SYS 49152:POKE56325,S
321 PRINT"................................................TIME   "
322 FORN=31TO999STEP40:POKE1024+N,28:POKE55236+N,10:NEXT
322 PRINT".......................................................POLLEN"
324 PRINT"..................................................LEVEL."
330 POKEV+30,0:TI$="000000"
340 IFPEEK(V+30)=123THENSC=SC+1:GOSUB5000
350 IFPEEK(V+30)=3THEN10000
360 T=T+1:IFT>UTHENGOSUB3000
365 PRINT"............................................";TI$;"...........";SC
366 PRINT"....................................................";L
367 IFTI$>"000200"ANDSC<SQTHEN10000
368 IFSC>SQTHEN8000
380 GOTO340
3000 T=0
3010 O=INT(RND(1)*255):IFO<25THEN3010
3020 W=INT(RND(1)*255):IFW(500RW)230THEN3020
3025 POKEV+2,O:POKEV+3,W
3030 RETURN
5000 X=INT(RND(1)*255):IFX<25THEN5000
5010 Y=INT(RND(1)*205):IFY(500RY)220THEN5010
5015 POKEV+14,X:POKEV+15,Y
5020 POKE54276,0:POKE54276,129:POKE54277,8:POKE54273,100
5030 RETURN
8000 POKE788,49:POKE789,234
8001 FORI=10TO100STEP20:POKE54276,0:POKE54277,40:FORJ=ITOI+10:POKE54276,21
8005 POKE54273,J
8010 POKE54290,0:POKE54290,17:POKE54291,40:POKE54287,J
8020 NEXT:NEXT
8100 FORN=255TO0STEP-20:POKE54276,0:POKE54276,17:POKE54277,40:POKE54273,N:NEXT
8110 S=S-3:U=U-5:L=L+1:SQ=SQ+20
8120 IFS<0THENS=30
8130 IFU<0THENU=20
9000 GOTO315
10000 S=213:POKEV+5,PEEK(53249):O=PEEK(53248):POKE788,49:POKE789,234
10010 FORN=0TO0STEP3
10020 POKE54276,0:POKE54276,129:POKE54277,6:POKE54273,100
10030 POKE2042,S:POKEV+4,N
10040 S=S+1:IFS>215THENS=213
10050 NEXT
10055 S=213
10060 FORN=0TO0STEP-3
10070 POKE54276,0:POKE54276,129:POKE54277,6:POKE54273,70
10080 POKE2042,S:POKEV+4,N:POKEV,N+10
10090 S=S+1:IFS>215THENS=213
10100 NEXT
10105 POKEV+21,0
10110 PRINT"J":PRINT"..................YOU'VE HAD YOUR CHIPS MATE"
10120 FORJ=0TO208:POKE54276,0:POKE54276,17:POKE54273,8:POKE54277,136
10130 NEXT
10140 GOTO30000
20000 PRINT"JS."         (  '"
20010 PRINT"            ) #$ )"
20020 PRINT"              %&."
20030 PRINT"                ' ("
20100 PRINT".........  ]+.     ]+. ]+."
20120 PRINT"  !     !   !"
20130 PRINT"+  £  ]+   £   £ ]+    ]+"
20140 PRINT"[[[£[[[[[[[£[[[£[[[[[[[[[[[[[[["
20150 PRINT"[[[[[[[[[[[£[[[[[[[[[[[[[[[[[[["
20160 PRINT"[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[["
20170 PRINT"[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[["
20180 PRINT"[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[["
20190 PRINT"[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[["
20200 RETURN
30000 PRINT"J":POKE53272,28:POKE54296,31:POKE54295,1:POKE53270,24
30001 POKE53282,13:POKE53283,2:POKE53280,0:POKE53281,0
30010 FORN=0TO255STEP20
30020 POKE54276,0:POKE54276,129:POKE54277,40:POKE54273,8:POKE54294,N
30040 NEXT
30050 FORN=0TO255STEP20
30060 POKE54276,0:POKE54276,129:POKE54277,40:POKE54273,N:POKE54293,N
30070 NEXT
30080 POKE54276,0:POKE54276,129:POKE54277,255:POKE54273,2:POKE54294,0
30090 PRINT".....................£££££££££££"
30100 PRINT".................... LITTLE BEE "
30110 PRINT"....................£££££££££££££"
30120 PRINT".... CONTROL THE LITTLE BEE USING"
30130 PRINT". A JOYSTICK IN PORT 2."
30140 PRINT". COLLECT 20 PIECES OF POLLEN EACH LEVEL."
30150 PRINT". YOU DIE IF YOU GET CAUGHT IN THE "
30153 PRINT". WEBB"
30154 PRINT". OR"
30155 PRINT". IF YOUR TIME REACHES 200."
30160 PRINT".............PRESS FIRE TO START"
30170 FORN=0TO39:POKE1024+N,28:POKE55296+N,10:POKE1984+N,28:POKE56256+N,10:NEXT
30175 FORN=0TO999STEP40:POKE1024+N,28:POKE55236+N,15:NEXT
30180 FORN=39TO999STEP40:POKE1024+N,28:POKE55236+N,15:NEXT
30190 JS=PEEK(56320)
30200 IFJS=111THEN235
30210 POKE53282,INT(RND(1)*16):POKE53283,INT(RND(1)*10)
```

```
30220 GOTO30190
49999 REM MACHINE CODE
50000 DATA 120,169,13,141,20,3,169,132
50010 DATA 141,21,3,88,96,173,0,220
50020 DATA 201,119,240,25,201,123,240,34
50030 DATA 201,126,240,43,201,125,240,52
50040 DATA 238,248,7,173,248,7,201,211
50050 DATA 240,55,76,49,234,173,0,208
50060 DATA 201,255,240,53,238,0,208,76
50070 DATA 49,234,173,0,208,201,25,240
```

```
50080 DATA 40,206,0,208,76,49,234,173
50090 DATA 1,208,201,50,240,27,206,1
50100 DATA 208,76,49,234,174,173,1,208,201
50110 DATA 230,240,14,238,1,208,76,49
50120 DATA 234,169,208,141,248,7,76,49
50130 DATA 234,76,49,234,0,192,5,173,-1
50200 REM SPRITE DATA
50210 DATA 0,0,0,0,0,0,0,0
50220 DATA 0,0,0,0,0,0,0,0
50230 DATA 0,0,0,12,0,0,63,0
50240 DATA 0,255,192,0,204,192,3,222
50250 DATA 240,43,204,250,3,255,240,8
50260 DATA 247,196,32,63,1,0,12,0
50270 DATA 0,8,0,0,8,0,0,8
50280 DATA 0,0,4,0,0,4,0,192
50290 DATA 0,0,0,0,0,0,0,0
50300 DATA 0,0,0,0,0,0,0,0
50310 DATA 0,0,0,12,0,0,63,0
50320 DATA 0,255,192,0,222,192,35,204
50330 DATA 242,11,204,248,3,255,240,40
50340 DATA 247,197,0,63,0,0,12,0
50350 DATA 0,8,0,0,8,0,0,32
50360 DATA 0,0,16,0,0,16,0,192
50370 DATA 0,0,0,0,0,0,0,0
50380 DATA 0,0,0,0,0,0,0,0
50390 DATA 0,0,0,12,0,0,63,0
50400 DATA 0,255,192,0,204,192,3,222
50410 DATA 240,43,204,250,3,255,240,8
50420 DATA 247,196,32,63,1,0,12,0
50430 DATA 0,8,0,0,8,0,0,8
50440 DATA 0,0,4,0,0,4,0,192
50450 DATA 0,0,0,0,0,0,0,0
50460 DATA 0,0,0,0,0,0,0,0
50470 DATA 0,0,0,12,0,0,63,0
50480 DATA 0,255,192,0,204,192,3,204
50490 DATA 240,11,222,248,35,255,242,8
50500 DATA 247,196,32,63,4,0,12,0
50510 DATA 0,8,0,0,8,0,0,2
50520 DATA 0,0,1,0,0,1,0,192
50530 DATA 133,237,136,78,34,112,50,34
50540 DATA 40,49,254,68,75,37,131,132
50550 DATA 249,234,134,174,90,153,117,98
50560 DATA 142,249,162,149,246,146,255,255
50570 DATA 255,149,246,146,150,169,146,157
50580 DATA 117,114,114,114,58,141,173,38
50590 DATA 72,248,195,89,36,196,33,37
50600 DATA 40,98,254,48,146,38,200,177
```

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```
50610 DATA 0,0,0,0,0,0,0,0
50620 DATA 0,0,0,0,0,0,0,120
50630 DATA 0,248,135,55,4,128,252,2
50640 DATA 159,255,225,161,50,17,71,123
50650 DATA 137,139,255,68,147,255,34,161
50660 DATA 254,18,65,134,10,64,204,8
50670 DATA 64,120,8,64,72,8,0,0
50680 DATA 0,0,0,0,0,0,0,128
50690 DATA 0,0,0,0,0,0,0,0
50700 DATA 0,0,0,0,0,0,0,120
50710 DATA 3,224,135,52,16,128,252,8
50720 DATA 159,255,132,161,50,67,71,183
50730 DATA 160,139,255,144,147,255,72,161
50740 DATA 254,38,65,206,32,64,252,32
50750 DATA 64,72,24,64,0,0,0,0
50760 DATA 0,0,0,0,0,0,0,128
50770 DATA 0,0,0,0,0,0,0,0
50780 DATA 0,0,0,0,0,0,0,24
50790 DATA 3,224,39,52,16,32,252,8
50800 DATA 39,255,132,73,50,68,19,123
50810 DATA 163,35,255,144,39,255,72,73
50820 DATA 254,40,17,134,38,16,204,32
50830 DATA 32,120,24,0,72,0,0,0
50840 DATA 0,0,0,0,0,0,0,128
50850 DATA 0,0,0,0,0,0,0,0
50860 DATA 0,0,0,0,0,0,0,0
50870 DATA 0,0,0,0,0,0,0,0
50880 DATA 0,0,0,0,48,0,0,120
50890 DATA 0,0,48,0,0,0,0,0
50900 DATA 0,0,0,0,0,0,0,0
50910 DATA 0,0,0,0,0,0,0,0
50920 DATA 0,0,0,0,0,0,0,135
51000 DATA-1
51200 REM CHARACTER SET DATA
51210 DATA 51,51,204,255,204,255,204,255
51220 DATA 211,211,211,211,211,211,211,211
51230 DATA 0,0,8,42,42,42,10,10
51240 DATA 40,170,138,162,168,136,174,190
51250 DATA 0,0,0,40,170,138,168,168
51260 DATA 0,0,0,0,0,0,0,0
51270 DATA 190,170,170,138,170,40,16,16
51280 DATA 102,102,102,0,0,0,0,0
51290 DATA 3,15,31,31,63,63,127,127
51300 DATA 192,240,248,248,252,252,254,254
51310 DATA 127,127,63,63,31,31,15,3
51320 DATA 254,254,252,252,248,248,240,192
51330 DATA 0,2,4,24,24,32,96,128
51340 DATA 128,64,48,48,8,4,3,1
51350 DATA 0,0,0,0,0,0,0,255,-1
READY.
```

LITTLE BEE

```
0 PRINT"◆":POKE53280,6:POKE53281,6:PRINT"■■■■■■■■■■■■■■■■■■■■■PLEASE WAIT."
1 PRINT"■■■■■■■■I AM SETTING THE GRAPHICS UP"
10 POKE52,48:POKE56,48:CLR
11 POKE56334,PEEK(56334)AND254
12 POKE1,PEEK(1)AND251
13 FORI=0TO511:POKEI+12288,PEEK(I+53248):NEXT
14 POKE1,PEEK(1)OR4
15 POKE56334,PEEK(56334)OR1
20 FORI=0TO511STEP8:A=12288+1+I:B=PEEK(A):POKEA,BAND4:NEXT
50 PC=49152
60 READCO:IFCO=-1THEN100
70 POKEPC,CO:PC=PC+1:GOTO60
100 PC=13312
110 READCO:IFCO=-1THEN200
120 POKEPC,CO:PC=PC+1:GOTO110
200 PC=12504
210 READCO:IFCO=-1THEN230
220 POKEPC,CO:PC=PC+1:GOTO210
230 GOTO30000
235 POKE53280,6:POKE53281,6:PRINT"◆":GOSUB20000
300 V=53248:POKEV+21,135:POKEV+28,1:POKEV,150:POKEV+1,150:POKE2047,216:SC=0:L=0
305 POKEV+46,7:POKEV+37,0:POKEV+38,7:POKEV+39,0:POKEV+40,1:POKE2041,212
306 POKEV+23,2:POKEV+29,2:POKEV+41,0
307 POKE54295,15:POKE54295,0:S=30:U=30:SQ=19
310 POKE53270,24:POKE53272,28:POKE53282,13:POKE53283,2
315 GOSUB3000:GOSUB5000
320 SYS 49152:POKE56325,S
321 PRINT"■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■10000 TIME   "
322 FORN=31TO999STEP40:POKE1024+N,28:POKE55296+N,10:NEXT
323 PRINT"■■■■■■■■■■■■■■■■■■■■■■■■■10000000000000 POLLEN"
324 PRINT"■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■LEVEL"
330 POKEV+30,0:TI$="000000"
340 IFPEEK(V+30)=129THENSC=SC+1:GOSUB5000
350 IFPEEK(V+30)=3THEN10000
360 T=T+1:IFT>UTHENGOSUB3000
365 PRINT"■■■■■■■■■■■■■■■■■■■■■■■■■■■■■10000000";TI$;"■■■■■■■■10000000000";SC
366 PRINT"■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■";L
367 IFTI$>"000200"ANDSC<SQTHEN10000
368 IFSC>SQTHEN8000
380 GOTO340
3000 T=0
3010 Q=INT(RND(1)*255):IFQ<25THEN3010
3020 W=INT(RND(1)*255):IFW<50ORW>230THEN3020
3025 POKEV+2,Q:POKEV+3,W
3030 RETURN
5000 X=INT(RND(1)*255):IFX<25THEN5000
5010 Y=INT(RND(1)*205):IFY<50ORY>220THEN5010
5015 POKEV+14,X:POKEV+15,Y
5020 POKE54276,0:POKE54276,129:POKE54277,8:POKE54278,100
5030 RETURN
8000 POKE788,49:POKE789,234
8001 FORI=10TO100STEP20:POKE54276,0:POKE54277,40:FORJ=ITOI+10:POKE54276,21
8005 POKE54273,J
8010 POKE54290,0:POKE54290,17:POKE54291,40:POKE54287,J
8020 NEXT:NEXT
8100 FORN=255TO0STEP-20:POKE54276,0:POKE54276,17:POKE54277,40:POKE54273,N:NEXT
8110 S=S-3:U=U-5:L=L+1:SQ=SQ+20
```

COMPUTER GAMER JULY 1985

```
8120 IFS<0THENS=30
8130 IFU<0THENU=20
9000 GOTO315
10000 S=213:POKEV+5,PEEK(53249):O=PEEK(53248):POKE788,49:POKE789,234
10010 FORN=0TO0STEP3
10020 POKE54276,0:POKE54276,129:POKE54277,6:POKE54273,100
10030 POKE2042,S:POKEV+4,N
10040 S=S+1:IFS>215THENS=213
10050 NEXT
10055 S=213
10060 FORN=0TO0STEP-3
10070 POKE54276,0:POKE54276,129:POKE54277,6:POKE54273,70
10080 POKE2042,S:POKEV+4,N:POKEV,N+10
10090 S=S+1:IFS>215THENS=213
10100 NEXT
10105 POKEV+21,0
10110 PRINT"◆":PRINT"■■■■■■■■■■■■■■■■YOU'VE HAD YOUR CHIPS MATE"
10120 FORJ=0TO200:POKE54276,0:POKE54276,17:POKE54273,8:POKE54277,136
10130 NEXT
10140 GOTO30000
20000 PRINT"◆■"                         (  '"
20010 PRINT"                         ) #≠ )"
20020 PRINT"                            %&"
20030 PRINT"                            ' ("
20100 PRINT"■■■■■■■■■■■■ ]†←        ]†← ]†← "
20120 PRINT"        !    !  !            "
20130 PRINT"← £ ]← £  £ ]←    ]←     "
20140 PRINT"[[[£[[[[[[[£[[[£[[[[[[[[[[[[[[["
20150 PRINT"[[[[[[[[£[[[[[[[[[[[[[[[[[[[[[["
20160 PRINT"[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[["
20170 PRINT"[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[["
20180 PRINT"[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[["
20190 PRINT"[[[[[[[[[[[[[[[[[[[[[[[[[[[[[[["
20200 RETURN
30000 PRINT"◆":POKE53272,28:POKE54296,31:POKE54235,1:POKE53270,24
30001 POKE53282,13:POKE53283,2:POKE53280,0:POKE53281,0
30010 FORN=0TO255STEP20
30020 POKE54276,0:POKE54276,129:POKE54277,40:POKE54273,8:POKE54294,N
30040 NEXT
30050 FORN=0TO255STEP20
30060 POKE54276,0:POKE54276,129:POKE54277,40:POKE54273,11:POKE54293,N
30070 NEXT
30080 POKE54276,0:POKE54276,129:POKE54277,255:POKE54273,2:POKE54294,0
30090 PRINT"■■■■■■■■■■■■■■£££££££££££"
30100 PRINT"■■■■■■■■■■■■■■£ LITTLE BEE◆"
30110 PRINT"■■■■■■■■■■■■■■£££££££££££"
30120 PRINT"■■■ CONTROL THE LITTLE BEE USING"
30130 PRINT"■■ A JOYSTICK IN PORT 2."
30140 PRINT"■■ COLLECT 20 PIECES OF POLLEN EACH LEVEL."
30150 PRINT"■ YOU DIE IF YOU GET CAUGHT IN THE "
30153 PRINT"■ WEBB"
30154 PRINT"■■ OR"
30155 PRINT"■■ IF YOUR TIME REACHES 200."
30160 PRINT"■■■■■■■■■■■■■PRESS FIRE TO START"
30170 FORN=0TO039:POKE1024+N,28:POKE1984+N,28:POKE56256+N,10:NEXT
30175 FORN=0TO399STEP40:POKE1024+N,28:POKE55296+N,15:NEXT
30180 FORN=39TO999STEP40:POKE1024+N,28:POKE55296+N,15:NEXT
30190 JS=PEEK(56320)
30200 IFJS=111THEN235
30210 POKE53282,INT(RND(1)*16):POKE53283,INT(RND(1)*10)
30220 GOTO30190
49999 REM MACHINE CODE
50000 DATA 120,169,13,141,20,3,169,192
50010 DATA 141,21,3,88,96,173,0,220
50020 DATA 201,119,240,25,201,123,240,34
50030 DATA 201,126,240,43,201,125,240,52
50040 DATA 238,248,7,173,248,7,201,211
50050 DATA 240,55,76,49,234,173,0,206
50060 DATA 201,255,240,53,238,0,208,76
50070 DATA 49,234,173,0,208,201,25,240
50080 DATA 40,206,0,208,76,49,234,173
50090 DATA 1,208,201,50,240,27,206,1
50100 DATA 208,76,49,234,173,1,208,201
50110 DATA 230,240,14,238,1,208,76,49
50120 DATA 234,169,208,141,248,7,76,49
50130 DATA 234,76,49,234,0,192,5,173,-1
50200 REM SPRITE DATA
50210 DATA 0,0,0,0,0,0,0,0
50220 DATA 0,0,0,0,0,0,0,0
50230 DATA 0,0,0,12,0,0,63,0
50240 DATA 0,255,192,0,204,192,3,222
50250 DATA 240,43,204,250,3,255,240,8
50260 DATA 247,196,32,63,1,0,12,0
50270 DATA 0,8,0,0,8,0,0,8
50280 DATA 0,0,4,0,0,4,0,192
50290 DATA 0,0,0,0,0,0,0,0
50300 DATA 0,0,0,0,0,0,0,0
50310 DATA 0,0,0,12,0,0,63,0
50320 DATA 0,255,192,0,222,192,35,204
50330 DATA 242,11,204,24,3,255,240,40
50340 DATA 247,197,0,63,0,0,12,0
50350 DATA 0,8,0,0,8,0,0,32
```

Right column

```
50360 DATA 0,0,16,0,0,16,0,192
50370 DATA 0,0,0,0,0,0,0,0
50380 DATA 0,0,0,0,0,0,0,0
50390 DATA 0,0,0,0,12,0,0,63,0
50400 DATA 0,255,192,0,204,192,3,222
50410 DATA 240,43,204,250,3,255,240,8
50420 DATA 247,196,32,63,1,0,12,0
50430 DATA 0,8,0,0,8,0,0,8
50440 DATA 0,0,4,0,0,4,0,192
50450 DATA 0,0,0,0,0,0,0,0
50460 DATA 0,0,0,0,0,0,0,0
50470 DATA 0,0,0,12,0,0,63,0
50480 DATA 0,255,192,0,204,192,3,204
50490 DATA 240,11,222,248,35,255,242,8
50500 DATA 247,196,8,63,4,0,12,0
50510 DATA 0,8,0,0,8,0,0,2
50520 DATA 0,0,1,0,0,1,0,192
50530 DATA 133,237,136,79,34,112,50,34
50540 DATA 40,49,254,68,75,37,131,132
50550 DATA 249,134,234,174,30,153,117,98
50560 DATA 142,249,162,149,246,146,255,255
50570 DATA 255,149,246,146,150,169,146,157
50580 DATA 117,114,114,114,58,141,173,38
50590 DATA 72,248,195,39,36,196,39,37
50600 DATA 40,98,254,48,146,38,200,177
50610 DATA 0,0,0,0,0,0,0,0
50620 DATA 0,0,0,0,0,0,0,120
50630 DATA 0,248,135,55,4,128,252,2
50640 DATA 159,255,225,161,50,17,71,123
50650 DATA 137,139,255,68,147,255,34,161
50660 DATA 254,18,65,134,10,64,204,8
50670 DATA 64,120,8,64,72,8,0,0
50680 DATA 0,0,0,0,0,0,0,128
50690 DATA 0,0,0,0,0,0,0,0
50700 DATA 0,0,0,0,0,0,0,120
50710 DATA 3,224,135,52,16,128,252,8
50720 DATA 159,255,132,161,50,67,71,183
50730 DATA 160,139,255,144,147,255,72,161
50740 DATA 254,38,65,206,32,64,252,32
50750 DATA 64,72,24,64,0,0,0,0
50760 DATA 0,0,0,0,0,0,0,128
50770 DATA 0,0,0,0,0,0,0,0
50780 DATA 0,0,0,0,0,0,0,24
50790 DATA 3,224,39,52,16,32,252,8
50800 DATA 39,255,132,73,50,68,19,123
50810 DATA 163,35,255,144,39,255,72,73
50820 DATA 254,40,17,134,38,16,204,32
50830 DATA 32,120,24,0,72,0,0,0
50840 DATA 0,0,0,0,0,0,0,128
50850 DATA 0,0,0,0,0,0,0,0
50860 DATA 0,0,0,0,0,0,0,0
50870 DATA 0,0,0,0,0,0,0,0
50880 DATA 0,0,0,0,48,0,0,120
50890 DATA 0,0,48,0,0,0,0,0
50900 DATA 0,0,0,0,0,0,0,0
50910 DATA 0,0,0,0,0,0,0,0
50920 DATA 0,0,0,0,0,0,0,135
51000 DATA-1
51200 REM CHARACTER SET DATA
51210 DATA 51,51,255,204,255,204,255,204
51220 DATA 211,211,211,211,211,211,255,211
51230 DATA 0,0,8,42,42,42,10,10
51240 DATA 40,170,138,162,168,136,174,190
51250 DATA 0,0,0,40,170,138,168,168
51260 DATA 0,0,0,0,0,0,0,0
51270 DATA 190,170,170,138,170,40,16,16
51280 DATA 102,102,102,0,0,0,0,0
51290 DATA 3,15,31,31,63,63,127,127
51300 DATA 192,240,248,248,252,252,254,254
51310 DATA 127,127,63,63,31,31,15,3
51320 DATA 254,254,252,252,248,248,240,192
51330 DATA 0,2,4,24,24,32,96,128
51340 DATA 128,64,48,48,8,4,3,1
51350 DATA 0,0,0,0,0,0,255,-1
READY.
```

BATTLESHIPS

by Steven Skinner

```
10 ' --
----------
20 ' BATTLE-SHIPS
30 '------------+--
40 '
50 ' (C) S.SKINNER      1985
60 ' -------------------------
70 '
80 KEY 139,"MODE 2:INK 0,0:BORDER 0:INK 1,1
5:PEN 1:LIST"+CHR$(13)
90 '
100 ' OPENING TITLE PAGE
110 CALL &BC02
120 DEFINT a-z
130 MODE 0:BORDER 0:INK 0,0:INK 1,21
140 '
150 FOR A=2 TO 15:INK A,A+4:NEXT
160 n$="COMPUTER GAMER"
170 x%=4:n%=1
180 WHILE n%<15
190 FOR y%=2 TO 6:LOCATE x%,y%:PRINT MID$(n
$,n%,1):LOCATE x%,y%-1:PRINT" ":CALL &BD19:
NEXT
200 x%=x%+1:n%=n%+1:WEND
210 FOR D=1 TO 500:NEXT
220 n$="PRESENTS":x%=7:y%=8:n%=1
230 WHILE n%<9
240 FOR c%=129 TO 170:LOCATE x%,y%:PRINT CH
R$(c%):NEXT:LOCATE x%,y%:PRINT MID$(n$,n%,1
)
250 n%=n%+1:x%=x%+1
260 WEND
270 FOR d=1 TO 500:NEXT
280 LOCATE 5,12:B$="BATTLE-SHIPS":P=2:FOR A
=1 TO LEN(B$):PEN P:PRINT MID$(B$,A,1);:P=P
+1:IF P>7 THEN P=2
290 NEXT
300 MOVE 100,190:DRAW 530,190,1
310 DRAW 530,240:DRAW 100,240:DRAW 100,190
320 FOR d=1 TO 500:NEXT
330 PEN 1:LOCATE 4,16:PRINT"PRESS THE SPACE
 BAR":LOCATE 7,19:PRINT"TO PLAY"
340 '
350 C=INT(RND*6)+2:NC=INT(RND*6)+2:INK C,NC
360 IF INKEY$<>" " THEN 350
370 FOR A=1 TO 15:INK A,A:NEXT
380 LOCATE 1,1:FOR N=1 TO 25:PRINT CHR$(11)
;:NEXT
390 '
400 ' DIMENSION ARRAYS FOR THE GRIDS'
410 '
420 NV=23:ag=0:YF=23:h=0:NN=0
430 Y$=" Your shot co-ordinates please    ":
C$=" My shot co-ordinates are "
440 DIM YG(19,11),CG(19,11),YS(19,11),CS(19
,11)
450 MODE 1
460 INK 0,0:INK 1,1:INK 2,24:INK 3,6:BORDER
 0
470 FOR Y=88 TO 500 STEP 32:MOVE 40,Y:DRAW
584,Y:NEXT
480 FOR X=40 TO 584 STEP 32
490 MOVE X,88:DRAW X,376
500 NEXT
510 PEN 3
520 LOCATE 4,21:PRINT"A B C D E F G H I J K
 L M N O P Q"
530 N$="987654321":FOR N=1 TO 9:LOCATE 2,(N
*2+1):PRINT MID$(N$,N,1):NEXT
540 '
550 ' PUT IN THE CO-ORDINATES OF FLEET
560 '
570 DATA Battleship,5,B,29,Cruiser-1,3,C,33
,Cruiser-2,3,C,33,Submarine-1,2,S,35,Submar
ine-2,2,S,35,Destroyer-1,4,D,31,Destroyer-2
,4,D,31,E,0,0,0
580 READ S$,SH,NA$,LE:IF S$="E" THEN 780
590 T=LEN(S$)+25
600 PEN 2:LOCATE 3,23:PRINT" ";S$;" Co-ordi
nates Please            "
610 L$=INKEY$:IF L$>="A" AND L$<"R" OR L$>=
"a" AND L$<"r" THEN LOCATE T,23:L$=UPPER$(L
$):SOUND 1,30,3,13:PRINT L$:X=ASC(L$)-64:EL
SE 610
620 N$=INKEY$:IF N$>"0" AND N$<="9" THEN LO
CATE T+1,23:SOUND 1,30,3,13:PRINT N$:Y=ASC(
N$)-48:ELSE 620
630 '
640 LOCATE 1,23:PRINT SPC(39)
650 L=2*ASC(L$)-126:N=117-2*ASC(N$)
660 IF L>LE THEN LOCATE 3,23:PRINT"Does not
 fit on the grid, Try again":FOR DE=1 TO 30
00:NEXT:GOTO 600
670 CH=0:no=0
680 IF YG(X+CH,Y-1)>0 THEN 750 ELSE IF YG(X
+CH,Y+1)>0 THEN 750
690 IF YG(X+CH,Y)>0 THEN no=1:GOTO 750
700 IF CH<SH THEN CH=CH+1:GOTO 680
710 F=0:FOR CH=-1 TO 1:IF YG(X-1,Y+CH)>0 OR
 YG(X+SH,Y+CH)>0 THEN F=1
720 NEXT:IF F=1 THEN 750 ELSE 760
730 GOTO 580
740 '
750 LOCATE 3,23:PRINT" Touching vessels are
 not allowed":FOR DE=1 TO 3000:NEXT:IF no=1
 THEN 600 ELSE FOR AR=0 TO (SH-1):YG(X+AR,Y
)=0:NEXT:GOTO 600
760 FOR AR=0 TO (SH-1):YG(X+AR,Y)=SH:NEXT
770 FOR Z=0 TO (2*(SH-1)) STEP 2:LOCATE (L+
Z),N:PRINT NA$:NEXT:GOTO 580
780 LOCATE 7,23:PRINT"Your grid is now comp
lete.":FOR DE=1 TO 3000:NEXT:LOCATE 3,23:PR
INT SPC(36)
790 '
800 ' COMPUTER SETS UP ITS OWN GRID
810 '
820 LOCATE 3,23:PRINT"    I'm now setting u
p my grid":FOR Y=3 TO 19 STEP 2:FOR X=4 TO
36 STEP 2:LOCATE X,Y:PRINT" ":NEXT:NEXT
```

This game allows you to play the computer at an old favourite. For those who are not familar with the game here is a brief explanation of how to play.

When the program is run, a large grid will appear on the screen. This is your fleet. You tell the computer where to put your fleet. This consists of a battleship (5 squares), 2 destroyers (4 squares), 2 cruisers (3 squares) and 2 submarines (2 squares).

When you put them on the grid they must not touch each other in any way, (the computer checks this and informs you that you have to replace your vessel if this should occur). Once all your fleet have been entered the computer sets up its own grid. After the game starts, with your first shot. By typing in a set of co-ordinates you will be told whether you scored a hit or a miss. If you score a hit the grid will show you what vessel you have hit. With each hit you gain
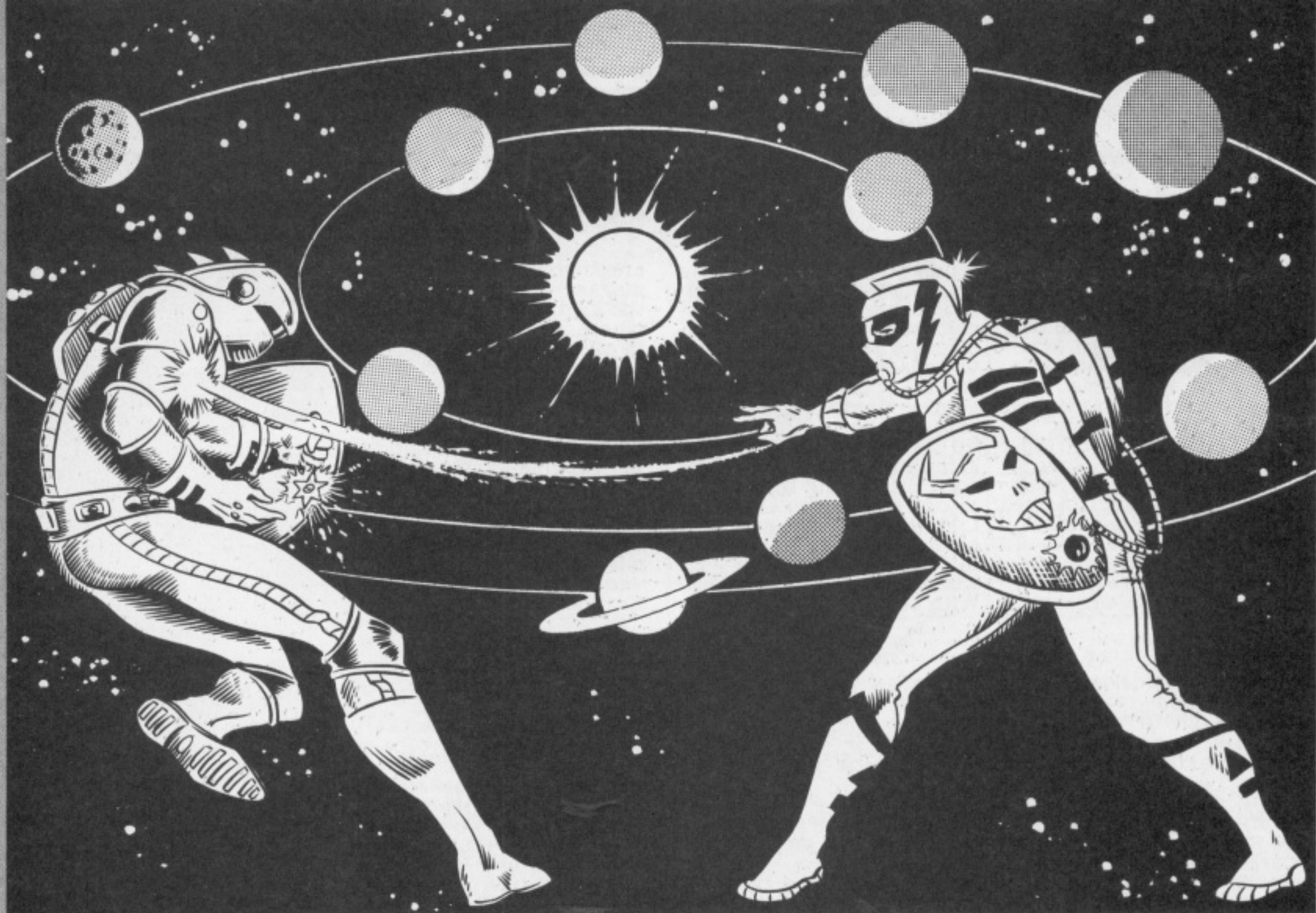
another shot. If you miss, a marker will be placed on the grid to keep a record of where you tried, (you will be allowed another go if at a co-ordinate already tried). Then the computer has a shot and the same rules apply to it. This continues until either player has found the opponents entire fleet.

Rem statements are included to show what is happening. The computer plays a fair game to allow you to have a chance of winning and at no stage does it have a quick look at the grid!

```
830 RESTORE
840 READ S$,SH,NA$,LE:IF S$="E" THEN 950
850 X=INT(RND*17)+1:Y=INT(RND*8)+1
860 IF X+SH>18 THEN 850
870 CH=0:no=0
880 IF CG(X+CH,Y-1)>0 OR CG(X+CH,Y+1)>0 THE
N 930
890 IF CG(X+CH,Y)>0 THEN no=1:GOTO 930
900 IF CH<SH THEN CH=CH+1:GOTO 880
910 F=0:FOR CH=-1 TO 1:IF CG(X-1,Y+CH)>0 OR
 CG(X+SH,Y+CH)>0 THEN F=1
920 NEXT:IF F=1 THEN 930 ELSE 940
930 IF no=1 THEN 850:ELSE FOR AR=0 TO (SH-1
):CG(X+AR,Y)=0:NEXT:GOTO 850
940 FOR AR=0 TO (SH-1):CG(X+AR,Y)=ASC(NA$):
NEXT:GOTO 840
950 N=0:FOR Y=1 TO 7:FOR X=1 TO 18
960 IF CG(X,Y)>0 THEN N=N+1
970 NEXT:NEXT:IF N<>23 THEN FOR Y%=1 TO 9:F
OR X%=1 TO 18:CG(X%,Y%)=0:NEXT:NEXT:GOTO 83
0
980 PRINT CHR$(7)
990 LOCATE 3,23:PRINT"      My grid is now
complete ":FOR de=1 TO 3000:NEXT:LOCATE 3,2
3:PRINT"    Let the battle commence ! ":FO
R DE=1 TO 3000:NEXT:LOCATE 3,23:PRINT SPC(3
6)
1000 GOSUB 1420
1010 LOCATE 3,23:PRINT Y$:H=0
1020 '
1030 ' YOUR TURN TO PLAY
1040 '
1050 L$=INKEY$:IF L$>="A" AND L$<"R" OR L$>
="a" AND L$<"r" THEN LOCATE 34,23:L$=UPPER$
(L$):SOUND 1,30,3,13:PRINT L$:X=ASC(L$)-64:
ELSE 1050
1060 N$=INKEY$:IF N$>"0" AND N$<="9" THEN L
OCATE 35,23:SOUND 1,30,3,13:PRINT N$:Y=ASC(
N$)-48:ELSE 1060
1070 L=2*ASC(L$)-126:N=117-2*ASC(N$)
1080 IF YS(X,Y)=1 THEN LOCATE 3,23:PRINT"
 You've already tried there !!    ":FOR DE=1
 TO 2000:NEXT:GOTO 1010
1090 IF CG(X,Y)=0 THEN LOCATE L,N:PEN 1:PRI
NT CHR$(225):PEN 2:LOCATE 3,23:PRINT SPC(36
):LOCATE 15,23:PRINT"You missed":FOR A=500
TO 700 STEP 2:SOUND 1,A,1,15:SOUND 2,A+4,1,
15:NEXT:FOR DE=1 TO 2000:NEXT:YS(X,Y)=1:PEN
 2
1100 '
1110 IF CG(X,Y)>1 THEN LOCATE 3,23:PRINT"
   Oh dear, I've been hit !!    ":FOR NT=1
 TO 3:FOR A=0 TO 300 STEP 6:SOUND 1,A,1,15:
NEXT:NEXT:LOCATE L,N:PEN 2:PRINT CHR$(CG(X,
Y)):YS(X,Y)=1:FOR DE=1 TO 1200:NEXT:NV=NV-1
:GOSUB 1420:H=1
1120 ' CHECK FOR GAME OVER
1130 IF NV=0 THEN GOSUB 1420:LOCATE 3,23:PR
INT"  You've sunk my entire fleet !!":GOSUB
 1450:FOR DE=1 TO 3000:NEXT:LOCATE 3,23:PRI
NT SPC(36):ag=1:H=0
1140 IF H=1 GOTO 1010
1150 '
1160 ' ANOTHER GAME REQUIRED
1170 '
1180 IF ag<>1 THEN 1200 ELSE LOCATE 3,23:PR
INT SPC(36):LOCATE 5,23:PRINT"Would you lik
e to play again ?"
1190 K$=INKEY$:IF K$="Y" OR K$="y" THEN RUN
:ELSE IF K$="N" OR K$="n" THEN CLS:END:ELSE
 1190
1200 IF h=1 THEN X=X+1:NN=NN+1:GOTO 1230
1210 IF h=2 THEN X=X-1:NN=NN+1:GOTO 1230
1220 X=INT(RND*17)+1:Y=INT(RND*9)+1
1230 IF X>18 THEN X=9:ELSE IF X<1 THEN X=1
1240 IF NN=18 THEN h=0:NN=0:GOTO 1200
1250 IF CS(X,Y)=1 THEN 1200
1260 h=0
1270 IF YF=0 THEN GOSUB 1420:LOCATE 3,23:PR
INT"I've sunk your entire fleet....":GOSUB
1450:FOR DE=1 TO 3000:NEXT:ag=1:GOTO 1180
1280 '
1290 ' COMPUTERS TURN TO SHOOT
1300 '
1310 LOCATE 3,23:PRINT ;"   ";C$;CHR$(X+64);
CHR$(Y+48):FOR DE=1 TO 2000:NEXT:CS(X,Y)=1
1320 IF YG(X,Y)>1 THEN LOCATE6 3,23:PRINT"
   I've struck a hit !!!!!     ":FOR NT=1 TO
3:FOR A=0 TO 300 STEP 6:SOUND 1,A,1,15:NEXT
:NEXT:GOSUB 1360:YF=YF-1:GOSUB 1420:FOR DE=
1 TO 2000:NEXT:h=1:IF YG(X+1,Y)<=1 THEN CS(
X+1,Y)=1:h=2
1330 IF h=1 OR h=2 THEN 1200
1340 IF YG(X,Y)=0 THEN LOCATE 3,23:PRINT SP
C(36):LOCATE 15,23:PRINT"I've missed...":FO
R A=500 TO 700 STEP 2:SOUND 1,A,1,15:SOUND
2,A+4,1,15:NEXT:FOR DE=1 TO 2000:NEXT:GOTO
1010
1350 IF h=0 THEN 1340
1360 IF Y<1 OR Y>8 GOTO 1410
1370 CS(X,Y-1)=1:CS(X,Y+1)=1
1380 IF X<1 OR X>18 THEN 1410
1390 CS(X,Y-1)=1:CS(X,Y+1)=1
1400 FOR A=-1 TO 1:CS(X+A,Y-1)=1:CS(X+A,Y+1
)=1:NEXT
1410 RETURN
1420 PEN 3:LOCATE 3,1:PRINT"My hits left";;
PEN 2:PRINT YF;" ";;PEN 3:PRINT TAB(21);"Yo
ur hits left";:PEN 2:PRINT NV;" "
1430 RETURN
1440 '
1450 'END OF GAME SUBROUTINE
1460 '
1470 FOR A=100 TO 3800 STEP 6:SOUND 1,A,1,1
5:SOUND 2,A+128,1,15:NEXT
1480 FOR D=1 TO 3000:NEXT
1490 LOCATE 1,1:FOR N=1 TO 25:PRINT CHR$(11
);:NEXT
1500 RETURN
```

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by Adam Manning

In this game, two players control opposing governments, each bidding for complete control of the solar system. Player 1 controls the inner half of the solar system, whilst player 2 controls the outer half. Total control of the solar system can be achieved in four ways, by taking over planets one by one (building up your Astro Navy all the time), surrendering, an all out attack on your opposing navy or forming an alliance with your opponent.

At the start, player 1 controls the planets from Mercury to Mars, player 2 controls the rest. To make the naming of new planets more logical, planets names start with the name of their parent sun and then its position out from that sun. Thus Mercury (nearest to the Sun) is called Sol 1, Venus (next nearest) is Sol 2. In later years (around 2505) the number part was changed into Roman numerals.

Here is the starting data on the planets, most of which will be useful to the players:

Sol 1
Pre-Space Colonisation
Name: Mercury.
Surface Area: 74,815,000 km square.
Starting population: 29,224,666.
Max population: 1,891,700,000
Capital State. Q'icksla.
Population of Q'icksla: 113,483.
Date of Colonisation: July 2016.
People working on Ferantium 143 at start: 438,700.
Planetary rating on Ferantium 143: 45%.
Ferantium 143 in stock at start: 1,893,400.
Satellites: None apart from several artificial ones.
F.143 is short for Ferantium 143.

Sol 2
Pre-Space Colonisation
Name: Venus.
Surface area: 460,260,000 square kilometres.
Starting population: 1,372,900,000
Max population: 11,736,630,000
Capital State: Afrotz.
Population of Afrotz: 4,923,337.
Date of Colonisation: Jan'ray/ 2013.
People working on F.143 at start: 123,561,000
Planetary rating of F.143: 40%.
F143 in stock at start: 4,320,000 tonnes.
Satellites: None apart from several artificial ones.

Sol 3
Pre-Space Colonisation
Name: Earth.
Surface Area: 511,180,000 square kms.
Starting population: 12,829,000,000
Max population: 13,035,090,000.
Capital State: Singpore.
Population of Singpore: 36,776,026.
Date of Colonisation: Pre-historic
People working on F.143 at start: 0
Planetary rating of F.143: 0%.
F.143 in stock at start: 0 ts.
Satellites: Sol 3 alpha. Some authorities prefer Sol 3 being called Sol 3A and Sol 3 Alpha s Sol 3B.

Sol 4
Pre-space Colonisation
Name: Mars.
Surface Area: 144,710,000 square kms.
Starting population: 323,950,000
Max. population: 3,690,105,000
Capital State: Radau.
Population of Radau: 1,161,713.
Date of Colonisation: Agust/2015.
People working on F.143 at start: 35,634,500.
Planetary rating of F.143: 30%.
F.143 in stock at start: 337,500 ts.
Satellites: Sol 4 alpha, Sol 4 beta.

Sol 5
Pre-Space Colonisation
Name: Jupiter.
Surface Area: 240,870, 000,000 Square kms.
Max. population: 6,142, 185,000,000.
Starting population: 5,688, 200,000.
Capital State: Zetsun.
Population of Zetsun: 22,088,229.
Date of Colonisation: June/ 2055.
People working on F.143 at start: 853,230,000
Planetary rating of F.143: 5%.
F.143 in stock at start: 16,000,000 ts.
Satellites: Sol 5 alpha to Sol 5 nu (asteroidal types not included)
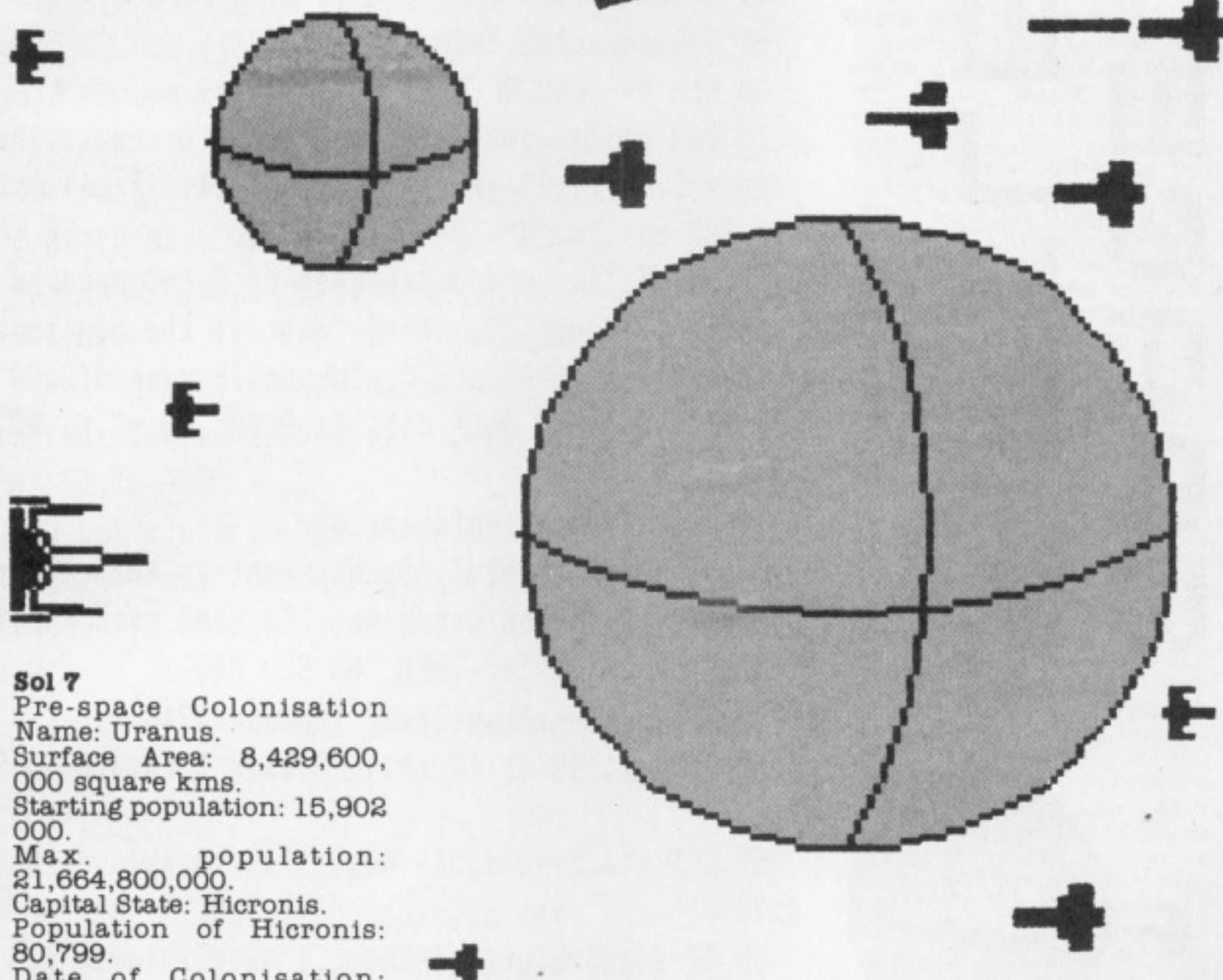
Sol 6
Pre-Space Colonisation
Name: Saturn.
Surface Area: 161,880,000, 000 km2
Starting population: 40,814,000.
Capital State: Riggesd.
Population of Riggsed: 186,712.
Date of Colonisation: June/ 2112.
People working on F.143 at start: 8,162,800.
Planetary rating of F.143: 4%.
F.143 in stock at start: 360,000 tonnes.
Satellites: Sol 6 alpha to Sol 6 iota.

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SPACE BATTLE 2091

Sol 7

Pre-space Colonisation
Name: Uranus.
Surface Area: 8,429,600,
000 square kms.
Starting population: 15,902
000.
Max. population:
21,664,800,000.
Capital State: Hicronis.
Population of Hicronis:
80,799.
Date of Colonisation:
Jan'ray/2207.
People working on F.143 at
start: 3,975,500.
Planetary rating of F.143:
10%.
F.143 in stock at start:
1,980,000 tonnes.
Satellites: Sol 7 alpha to Sol
7 epsilon.

Sol 8

Pre-Space Colonisation
Name: Neptune.
Surface   Area:
7,697,600,000 square kms.
Starting   population:
1,889,915.
Max.   population:
196,288,800,000.
Capital State: M'reen.
Population of M'reen:
10,183.
Date of Colonisation:
Janurar/2325.
People working on F.143 at
start: 566,975.
Planetary rating of F.143:
12%.
F.143 in stock at start:
1,740,000 tonnes.
Satellites: Sol 8 alpha, Sol 8
beta.

Sol 9

Pre-Space Colonisation
Name: Pluto.
Surface Area: 28,274,334
square kilometres.
Starting population: 1,348.
Max.   population:
7,209,955,200.
Capital State: Tobak.
Population of Tobak: 1,294.
Date of Colonisation:
A'gust/2426.
People working on F.143 at
start: 472.
Planetary rating of F.143:
15%.
F.143 in stock at start: 184,
000 tonnes.
Satellites: Sol 9 Alpha, some
authorities prefer Sol 9 be-
ing called Sol 9A and Sol 9
as Sol 9B.

Meaning of Titles.

Pre-Space Colonisation
Name. This is the name
given to the planet before
the Colonisation of Space
program began in 2010.

Surface Area. This is the
surface area of the planet in
square kilometres.

Starting population.
This is the human popula-
tion of the planet at the
beginning of turn 1.

Max. population. This is
the maximum human
population the planet can
support. It is 25.5 times the
surface area.

Capital State. The prin-
cipal human settlement on
the planet.

Population of Capital.
Population of the settle-
ment and its immediate
surroundings.

Date of colonisation. The
date in which the planet
had an appreciably sized
number of humans living
on it. If the number is over
2091 it is a computer
assisted prediction.

People working on F.143
The amount of humans
working on the production
of Ferantium 143, a

mineral used to build
houses, hospital, construct
space ships and fuel
vehicles. Curiously it is not
found on Sol 3.

Planetary rating of
F.143. This is the rating (as
a percentage) of how good
the planet is at producing
F.143.

F.143 in stock. How
much the planet has in its
stores in tonnes at the
beginning of turn 1. Tonnes
is termed ts in the program.

Satellites. The name of
any satellites the planet has
orbiting it, excluding
asteroidal types.

When the game is first
loaded, the title screen is
displayed and the computer
will ask the player what his
title is. Say you are player 1
and you wished to be
known as 'Emperor Ming'.
You would type in Emperor
as your title and Ming as
your name. It is then the
second players go at typing
in his name and title. After
this, the computer will
display the title screen for
the beginning of each turn.
It will print the turn
number, which player is
now playing, and that
players name and title. It
will then say how many
planets he/she rules and
will graphically illustrate
them. Next to be displayed
is how much money the
player has in doruz. The
standard unit of money
throughout the solar
system in the doruz, which
the sign for is 'DZ'. One
doruz is equal to approx-
imately £1430, so it is not
surprising that most people
deal in the millidoruz. The
computer will then display
which planets the player
currently rules and will
wait until he/she presses
'ENTER' to continue.

The computer will then
display the main menu. The
choices in this menu will
now be described in detail.

Readout on Planets.

This will display the in-
formation above, also ad-
ding the amount of Astro
Navy ships that are guar-
ding the planet. All the in-
formation has been up-
dated and will change as
the game progresses.

Buy Ferantium 143.

The computer will
display which planets the
player rules, and will ask

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from which of these planets does he/she wish to buy the F.143 from. It will then display how many ts the planet has in stock and how many doruz the planetary supplier wishes for one ts. If the player wishes to return to the main menu without buying any F.143, he can do so by typing in −1 when asked how many ts of F.143 he wants to buy. It then displays how many ts the player is buying and ask what price he is going to pay per ts. It will then display whether or not the planetary supplier agrees or not. If the supplier does not agree to sell it at that price, it will go back to asking how many ts the player wishes to buy. A turn is considered to be over after the player has bought some F.143.

War Manoeuvres.
When the player asks for this option, the computer will display a sub-menu with several options on it. These are:

Spy on next planet.
After paying the sometimes quite high fee, the computer will display approximately how many ships are guarding the next planet in or out of the boundary.

Alter Navy Posting.
This section is used to post ships around planets. The computer will ask what percentage of the whole fleet do you want around a certain planet.

Attack next planet.
Accessing this option allows the player to attack the next planet in or out of the boundary. If you control the outer half of the solar system, your ships will attack the next planet in from the boundary and vice versa if you control the inner planets.

All out attack.
With this the player can mount an all out attack on the opposing players fleet. All your ships will attack and all your opponents will defend. The cost of losing an all out attack are high, so it is not a good idea to do so unless you are sure you have a much more powerful Astro Navy than your opponent. Option 5 allows you to return to the main menu.

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```
1 REM **- Battle 2091 For System Sol -**
2 POKE 23609,80
3 GO SUB 8500
5 GO SUB 5e+2
10 GO SUB 1e+3
15 GO SUB 1.5e+3
17 IF menusel=8 THEN  GO TO 9990: GO TO 15
20 GO SUB (menusel-1)*500+2000
22 IF menusel=1 THEN  GO TO 15
25 IF menusel=5 THEN  GO TO 10
30 REM **- END OF TURN ACTIONS -**
35 DIM e$(1): INPUT "Do you want to change the
amoun-t of F.143 you use?"; LINE e$: IF e$(1)<>
"y" AND e$(1)<>"Y" THEN  GO TO 50
40 PRINT "The old percentage of F.143 usedwas
";p(user,2)*100;"%": INPUT "What is the new perc
entage of  F.143 used?";pfused: IF pfused<0 OR
pfused>100 THEN  BEEP .15,-5: BEEP .35,-7.5: GO
TO 40
41 LET p(user,2)=pfused/100
42 DIM e$(1): INPUT "Do you want to change the
amountused on the Astro Navy?"; LINE e$: IF e$(
1)="y" OR e$(1)="Y" THEN  GO SUB 400
50 LET p(user,1)=p(user,1)*p(user,2)
55 FOR a=1 TO 9: IF s(a,6)<>user THEN  GO TO 9
9
57 LET s(a,5)=s(a,5)+(s(a,1)*s(a,8)*s(a,3)*0.0
027397)
58 IF s(a,5)>1e+10 THEN  LET s(1,5)=1e+10
60 IF s(a,1)>s(a,2)*25.5 THEN  LET s(a,1)=s(a,
2)*25.5: GO TO 99
70 LET add=(.5-p(user,4)*s(a,1))*.000001: LET
s(a,1)=s(a,1)*1.0005+add
75 LET s(a,1)=INT s(a,1)
99 NEXT a
100 IF p(user,2)*(1-p(user,3))<(RND*.05+.05) OR
p(user,4)>(RND*.2+.4) OR RND<.005 THEN  PRINT "
As you were badly treating the  people they have
overthrown yourgoverment. You are still playing
but you will have to start again": LET p(user,1)
=p(user,1)*RND*.5: LET p(user,2)=RND: LET p(user
,3)=RND*.5: LET p(user,4)=RND*.5: LET p(user,5)=
p(user,5)*RND*.5
105 FOR a=1 TO 10: BEEP .01,a-10: BEEP .01,a-2:
BEEP .01,a+8: NEXT a
106 GO SUB 300
110 PRINT "It is now the other persons turn": P
RINT : PRINT : PRINT :
115 GO SUB 4950: GO SUB 1450: IF user=1 THEN  L
```

```
ET ads=pop/numpla*0.0143691/1430: LET p(user,5)=
p(user,5)+ads
  116 IF user=2 THEN  LET ads=pop/numpla*0.009579
4/1430
  117 IF p(user,5)<0 THEN  LET p(user,5)=0
  120 LET user=3-user: IF user=1 THEN  LET turn=t
urn+1
  130 GO SUB 9999: GO TO 10
  300 REM **- CHECK FOR WINNING -**
  305 GO SUB 1450: IF numpla=9 THEN  GO SUB 9000
  310 RETURN
  400 REM **- INPUT NEW AMOUNT FOR NAVY -**
  402 PRINT "The percentage of the used F.143on t
he Astro Navy was ";p(user,3)*100;"%"
  405 INPUT "What percentage of the F.143     used
do you want for the navy?";pfudnvy
  410 IF pfudnvy<0 OR pfudnvy>100 THEN  PRINT "In
correct Entry. Re-Enter.": BEEP .25,0: BEEP .25,
-5: GO TO 405
  415 LET p(user,3)=pfudnvy/100: PRINT "New perce
ntage of F.143 used fornavy:";pfudnvy'"New perce
ntage of F.143 used forcivilian needs:";100-pfud
nvy
  420 DIM e$(1): INPUT "Are you happy with this?"
; LINE e$: IF e$(1)="n" OR e$(1)="N" THEN  GO TO
400
  425 GO SUB 9999: RETURN
  430 REM **- Data for graphics -**
  435 DATA 0,207,161,162,164,168,207,0
  440 DATA 0,0,0,0,0,0,0,240
  445 DATA 1,3,1,7,1,7,11,14
  450 DATA 95,127,72,127,61,3,1,0
  455 DATA 17,209,225,255,47,56,23,255
  460 DATA 0,0,3,15,7,0,0,0
  465 DATA 7,255,128,255,255,1,0,0
  470 DATA 251,191,106,245,255,255,0,0
  475 DATA 0,0,252,3,223,208,208,232
  480 DATA 0,0,0,252,224,0,0,0
  485 DATA 244,244,251,252,252,251,244,244
  490 DATA 0,0,252,3,3,252,0,0
  491 DATA 0,0,0,248,248,0,0,0
  492 DATA 232,208,208,223,3,252,0,0,0,0,0,224,25
2,0,0,0,120,96,112,255,255,112,96,120,0,6,14,255
,255,14,6,0,0,0,0,0,24,24,0,0,0
  493 DATA 0,0,24,60,60,24,0,0,0,0,0,90,189,189,90,
0,0,60,126,255,255,255,255,126,60
  500 DIM s(9,8): FOR a=1 TO 9: FOR b=1 TO 8: REA
D s(a,b): NEXT b: NEXT a
  510 DATA 29224666,7.4815e+7,.45,0,1.8934e+6,1,1
```

Diplomacy.

Choosing option 4 on the main menu, diplomacy, allows you to communicate with your opposing ruler. There are two options in the sub-menu:

Force him to surrender.

Choosing this, you can ask your opponent whether or not he wants to surrender his forces peacefully.

Ask him whether or not he wishes to form an alliance. With this you can form an alliance of governments, and you will have unified the solar system peacefully. Option 3 allows you to return to the main menu.

Readout of general info.

This allows you to examine all the general data, such as what percent tax you have imposed on the people, how many people you rule, how strong your Astro Navy is, etc.

Surrender.

This option on the main menu allows you to surrender peacefully if you are doing badly.

Alter Taxes.

With this you can change the amount of taxes which is imposed on your people. The more tax you impose, the more money you will obtain at the end of a turn, but be warned, too high a level of taxation and the people will revolt, forcing you to start again!

Save Game.

And finally the last option allows you to save the game at the position you have achieved.

Secret information for player one only.
Your password to access the all out attack option is DNA. This must be typed in correctly, or else you will not be able to attack.

At the start of the game you have:
10ts of F.143 in governments stock.
20% of the F.143 is used at the end of each turn.
40% of the F.143 used is used on the Astro Navy.
A 10% level of taxation on the people.
No ships. Sol 1,2,3,4 under your rule.
A random amount of doruz (between 0 and 1 million).
Secret information for player two only.
Your password to access the all out attack option is UK. This must be typed in correctly when asked for your code number.

At the start of the game you have:
O ts of F.143 in government supply.
30% of the F.143 is used at the end of a turn.
50% of the F.143 used is used on the Astro Navy.
A 15% level of taxation on the people.
No ships. Sol 5,6,7,8,9 under your rule.
A random amount of doruz (between 0 and 10 million). 5,746,807,300 people under your rule.

For both players:

Near the start of the game, both of you will have to post your ships as they are not set at the beginning.

The amount of F.143 you have in government stocks will determine how strong your navy is. For example, say you have a thousand ts of F.143m and the amount of F.143 you use at the end of each turn is 60%. If the percent of F.143 used that is used on the Astro Navy is 50% then the total amount of ships in your whole fleet will be 1000 x 60% x 50% = 300 ships. The amount of ships you have in operational condition does not get added on to at the end of each turn, but changes according to how much F.143 you are using, It is therefore imperative to keep up your stocks of F.143.

On the battle screens, the attacker is presented by the x-wings, whilst the defender is the viper. The number of ships is not the actual amount of real ships the player has, but a ratio. The defender always is represented by 7 ships.

As stated under Taxes, more money can be gleened from the peoples pockets by raising tax. However too high a level of taxation and the people will revolt. Also a revolution occurs if not enough F.143 is used for civilian needs.

At the ends of each turn, the player will be asked if he/she wishes to change the amount of F.143 used. If the player wishes to change it, he has to type in the percent used. The rest will just lie in government supplies. The player can also change the amount of F.143 used on his Astro Navy.

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```
61,.15
 520 DATA 1.3729e+9,4.6026e+8,.4,0,4.32e+6,1,161
,.09
 530 DATA 1.2819e+10,5.1118e+8,0,0,0,1,161,0
 540 DATA 3.2395e+8,1.4471e+8,.3,0,337500,1,161,
.11
 545 REM ************************
 550 DATA 5.6882e+9,2.4087e+11,.05,0,1.6e+7,2,16
4,.15
 560 DATA 4.0814e+7,1.6188e+11,.04,0,360000,2,16
3,.2
 570 DATA 1.5902e+7,8.4296e+9,.1,0,1.98e+6,2,162
,.25
 580 DATA 1889915,7.6976e+9,.12,0,1.74e+6,2,162,
.3
 590 DATA 1348,28274334,.15,0,184000,2,161,.35
 595 DIM p(2,5): FOR a=1 TO 2: FOR b=1 TO 5: REA
D p(a,b): NEXT b: NEXT a
 600 DATA 10,.2,.4,.1,INT (RND*1e+6)+1,0,.3,.5,.
15,INT (RND*1e+7)+1
 620 LET attack=0: LET user=1
 630 LET turn=1
 640 INPUT "What is Player 1s Title "; LINE t$:
INPUT "What is Player 1s Name "; LINE n$: INPUT
"What is Player 2s Title "; LINE u$: INPUT "What
 is Player 2s Name "; LINE o$
 641 LET c$=CHR$ 68+CHR$ 78+CHR$ 65
 642 LET d$=CHR$ 85+CHR$ 75
 645 RETURN
1000 REM **- Title screen for start of turn -**
1001 LET bo=INT (RND*8): IF bo=3 OR bo=4 THEN  G
O TO 1001
1005 BORDER bo: PAPER bo: INK 7-bo: CLS
1010 CLS : PRINT TAB 13;"Turn ";turn
1020 PRINT : PRINT TAB 12;"Player ";user;" :-":
PRINT : IF user=1 THEN  PRINT  PAPER 7; INK 2;t$
;" ";n$
1025 IF user=2 THEN  PRINT  PAPER 5; INK 0;u$;"
";o$
1030 PRINT : PRINT TAB 4;"Ruler of ";: GO SUB 14
50: PRINT numpla;" planets."
1035 PRINT TAB 13;: FOR a=1 TO 9: IF s(a,6)=user
THEN  PRINT CHR$ s(a,7);
```



```
1036 NEXT a
1037 PRINT '
1040 PRINT "     Has ";p(user,5);" '"
1042 PRINT
1043 PRINT " Planets Ruled:- ": FOR a=1 TO 9: I
F s(a,6)=user THEN  PRINT "Sol ";a,
1044 NEXT a: PRINT
1045 IF attack=1 THEN  PRINT "Your opposing rule
r has attackedyour stronghold. However your  fo
rces warded off the attack."
1050 IF attack=2 THEN  PRINT "Your opposing rule
r has attackedone of your planets and has inv-ad
ed succesfully."
1055 LET attack=0: INPUT "Press ENTER to continu
e."; LINE e$: RETURN
1450 REM **- Fnd out how many planets player gov
erns -**
1455 LET numpla=0: FOR a=1 TO 9: IF s(a,6)=user
THEN  LET numpla=numpla+1
1460 NEXT a: RETURN
1500 REM **- Main Menu -**
1505 CLS : FOR a=0 TO 21: PRINT AT a,0;CHR$ 164:
 NEXT a: FOR a=1 TO 31: PRINT AT 21,a;CHR$ 164:
NEXT a: FOR a=20 TO 0 STEP -1: PRINT AT a,31;CHR
$ 164: NEXT a: FOR a=30 TO 1 STEP -1: PRINT AT 0
,a;CHR$ 164: NEXT a
1510 PRINT AT 1,12;"Main Menu"'AT 2,12;"---------
-"
1520 PRINT : PRINT "1. Readout on Planets.": PRI
NT : PRINT "2. Buy Ferantium 143.": PRINT : PRIN
T "3. War Manueveres.": PRINT : PRINT "4. Diplom
acy.": PRINT : PRINT "5. Readout of general info
.": PRINT : PRINT "6. Surrender.": PRINT : PRINT
 "7. Alter Taxes."
1521 PRINT '"8. Save Game."
1525 INPUT "Enter number:-";menusel: IF menusel<
1 OR menusel>8 THEN  BEEP .5,-25: GO TO 1525
1530 RETURN
2000 REM **- Readout Planets -**
2005 CLS : PRINT TAB 7;"Readout on Planets"'TAB
7;: FOR a=1 TO 18: PRINT CHR$ 162;: NEXT a
2010 FOR a=1 TO 9
2011 IF user<>s(a,6) AND a<>9 THEN  NEXT a
2012 IF a=9 AND user<>s(a,6) THEN  GO TO 2025
2015 PRINT : PRINT TAB 14;"Sol ";a;TAB 14;"=====
": PRINT "Population:";s(a,1): PRINT "Surface ar
ea:";s(a,2): PRINT "Max Population:";s(a,2)*25.5
: PRINT "F.143 Rating:";s(a,3)*100;"%": PRINT "N
avy Deployment:";s(a,4)*100;"%": PRINT "F.143 in
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stock:";s(a,5);" TS."
2016 PRINT "People working on F.143:";INT (s(a,1
)*s(a,8))
2017 PRINT "Navy Ships guarding planet:";INT (p(
user,1)*p(user,2)*p(user,3)*s(a,4))
2020 IF a<>9 THEN  INPUT "Press ENTER for next p
lanet."; LINE e$: NEXT a
2025 INPUT "Do you want to see this again?"; LNE
 e$: IF e$="" THEN  GO TO 2025
2026 IF e$(1)="y" OR e$(1)="Y" THEN  GO TO 2000
2030 RETURN
2500 REM **- BUY F.143 -**
2510 CLS : PRINT TAB 5;"Buying Ferantium 143."'T
AB 5;"======================"
2515 PRINT "Planets currently under your    rule
 :- ": FOR a=1 TO 9: IF s(a,6)=user THEN  PRINT
"Sol ";a,
2517 NEXT a: PRINT '
2518 PRINT "If you wish to return to the    main
 menu without buying F.143, type -1 in when aske
d how many  ts of it you wish to buy."
2519 PRINT "You have ";p(user,5);CHR$ 144
2520 INPUT "Which planet do you wis to buy the F
.143 from?";planet
2521 IF planet<0 OR planet>9 THEN  BEEP .1,-15:
BEEP .4,-10: GO TO 2520
2525  IF s(planet,6)<>user THEN  PRINT "You do n
ot rule that planet, so you cannot buy F.143 fro
m them.": BEEP .25,-30: BEEP .25,-25: GO TO 2520
2530 PRINT "Sol ";planet;" has ";s(planet,5);" t
s of F.143 in store."
2535 LET price=50+(1e+10-s(planet,5))/4e+7
2537 PRINT "The Planetary Supplier wants    ";:
LET price=INT price: PRINT price;CHR$ 144;" a ts
."
2540 INPUT "How many ts of F.143 do you wishto b
uy?";tsbuy: IF tsbuy>s(planet,5) THEN  PRINT "Th
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ey do not have that much in    stock. Try again."
: BEEP .3,-10: BEEP .2,-15: GO TO 2540
2541 IF tsbuy=-1 THEN  LET menusel=1: RETURN
2542 PRINT "You are buying ";tsbuy;"ts of F.143
";
2545 INPUT "What price per ts are you going to p
ay?";offer: IF p(user,5)<tsbuy*offer THEN  PRINT
 "You do not have enough money to buy that much.
": BEEP :1,-5: BEEP .4,-10: GO TO 2540
2546 PRINT "at ";offer;CHR$ 144;" a ts.": IF off
er<price*.8 THEN  PRINT "The Planetary Supplier
of F.143 will not sell it at that price.": FOR a
=0 TO -10 STEP -1: BEEP .016,a-5: BEEP .016,a: B
EEP .016,a+5: NEXT a: GO TO 2540
2550 PRINT "The Planetary Supplier of F.143 agre
es. You have ought ";tsbuy;" ts of F.143."
2555 LET p(user,5)=p(user,5)-offer*tsbuy: LET p(
user,1)=p(user,1)+tsbuy: LET s(planet,5)=s(plane
t,5)-tsbuy
2560 GO SUB 9999: RETURN
3000 REM **- War Manoeuvres -**
3005 CLS : PRINT TAB 9;"War Manoeuvres"'TAB 9;"-
--------------"
3010 PRINT : PRINT "1. Spy on next planet.": PRI
NT : PRINT "2. Alter Navy Posting.": PRINT : PRI
NT "3. Attack Next Planet.": PRINT : PRINT "4. A
ll out attack.": PRINT
3015 PRINT "5. Return to main menu.": PRINT
3020 INPUT "Enter choice:- ";warsel: IF warsel<1
 OR warsel>5 THEN  BEEP .2,-21: BEEP .3,-20: GO
TO 3020
3022 IF warsel=5 THEN  LET menusel=1: RETURN
3025 GO SUB warsel*100+3000: PRINT ''TAB 6;"Mano
euvres Completed.": BEEP .5,25: RETURN
3100 REM **- Spy On Next Planet -**
3101 PRINT "This spying mission will ost    you "
;: LET cost=INT (RND*1e+6)+1: PRINT cost;CHR$ 14
4: LET p(user,5)=p(user,5)-cost
3105 IF user=2 THEN  GO TO 3150
3110 LET pla=2
```

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3112 IF s(pla,6)<>2 THEN LET pla=pla+1: GO TO 3
112
3115 PRINT "The next planet out from the    boun
dary is Sol ";pla
3116 LET ships=INT (p(3-user,3)*p(3-user,2)*p(3-
user,1)*s(pla,4))
3120 PRINT "There are roughly ";INT (ships*((RND
*.2)+.9));" posted around it."
3140 RETURN
3150 LET pla=9
3155 IF s(pla,6)<>1 THEN LET pla=pla-1: GO TO 3
155
3160 PRINT "Sol ";pla;" is the next planet in to
w-ards the sun from the boundary."
3162 LET ship=INT (p(3-user,3)*p(3-user,2)*p(3-u
ser,1)*s(pla,4))
3165 PRINT "Posted around that planet are   appr
oximately ";INT (ship*((RND*.2)+.9));" ships."
3180 RETURN
3200 REM **- Alter Navy Postings -**
3201 LET percleft=100
3205 FOR a=1 TO 9: IF s(a,6)<>user THEN GO TO 3
290
321" IF percleft=0 THEN GO TO 3290
3215 PRINT "The old percentage posted aroundSol
";a;" was ";s(a,4)*100;"%.": INPUT "What percent
age of your total    fleet do you want posted aro
und Sol ";a);" (0-";(percleft);")";percent
3220 IF percent>percleft OR percent<0 THEN PRIN
T "Incorrect. Re-Enter.": 6 TO 3215
3225 LET s(a,4)=percent/100: LET percleft=percle
ft-percent
3230 PRINT "There are now ";INT (p(user,1)*p(use
r,2)*s(a,4));" posted around Sol ";a
3290 NEXT a
3295 GO SUB 9999: RETURN
3300 REM **- Attack Next Planet -**
3305 IF user=1 THEN LET pla=2: LET add=1
3310 IF user=2 THEN LET pla=8: LET add=-1
3315 IF s(pla,6)<>user THEN PRINT "The Next Pla
net is Sol ";pla: GO TO 3322
3320 LET pla=pla+add: GO TO 3315
3322 IF INT (s(pla-add,4)*p(user,3)*p(user,2)*p(
user,1))=0 THEN PRINT "You have no ships on you
```



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r planetto invade with.": GO SUB 9998: LET menus
el=1: RETURN
3325 PRINT "The cost of this battle is ";: LET c
ost=INT (RND*1e+6)+1: PRINT cost;CHR$ 144: LET p
(user,5)=p(user,5)-cost
3330 PRINT "Battle Commences."
3331 FOR a=1 TO RND*40: BEEP RND/20,RND*10+20: N
EXT a
3335 LET yatstr=INT (s(pla-add,4)*p(user,3)*p(us
er,2)*p(user,1))
3340 LET hatstr=INT (s(pla,4)*p(3-user,3)*p(3-us
er,2)*p(3-user,1))
3342 LET fnum=yatstr/(hatstr+.00001): LET range=
fnum+1: LET pick=RND*range
3345 IF pick<=fnum THEN LET win=1: GO SUB 5500:
 CLS : LET s(pla,4)=0: PRINT "Your forces have t
aken the plan-et": FOR a=1 TO 10: BEEP .033,a-5:
 BEEP .033,a: BEEP .033,a+10: NEXT a: LET s(pla-
add,1)=s(pla-add,1)*(RND*.1+.85): LET s(pla,1)=s
(pla,1)*(RND*.2+.4): LET s(pla,6)=user: LT attac
k=2: BEEP .2,25: BEEP .2,20: BEEP .25,30: GO SUB
 9999: RETURN
3350 LET win=0: GO SUB 5500: CLS : PRINT "The de
fending navy stopped your invasion.": FOR a=10 T
O 1 STEP -1: BEEP .03,a+5: BEEP .03,a: BEEP .03,
a-10: NEXT a: LET s(pla-add,1)=s(pla-add,1)*(RND
*.05+.85): LET s(pla,1)=s(pla,1)*(RND*.1+.8): LE
T attack=1: BEEP .2,-25: BEEP .2,-20: BEEP .25,-
30: GO SUB 9999: RETURN
3400 REM **- All out attack -**
3405 INPUT "Enter your code number:- "; LINE p$
3406 IF (user=1 AND p$=c$) OR (user=2 AND p$=d$)
 THEN PRINT "Correct code.": BEEP .1,0: GO TO 3
411
3410 PRINT "Incorrect Code number.": FOR a=1 TO
10: BEEP .1,-10: PAUSE 5: NEXT a: GO SUB 9999: L
ET menusel=1: RETURN
3411 LET yatstr=INT (p(user,3)*p(user,2)*p(user,
1)): IF yatstr=0 THEN PRINT "You have no ships
```

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in your whole fleet to attack with.": GO SUB 999
9: LET menusel=1: RETURN
3412 PRINT TAB 8;"ALL OUT ATTACK:GO!!": BEEP .25
,10: BEEP .25,5: BEEP .25,10
3415 PRINT "This attack will cost ";: LET cost=I
NT (RND*4.5e+6)+1: PRINT cost;CHR$ 144: LET p(us
er,5)=p(user,5)-cost
3420 LET hatstr=INT (p(3-user,3)*p(3-user,2)*p(3
-user,1)): LET fnum=yatstr/(hatstr+.0000001)
3430 LET range=fnum+1: LET pick=RND*range: IF pi
ck<fnum THEN LET win=1: GO SUB 5500: CLS : PRIN
T "You have succesfully invaded    your opponent
s territory, well  done!!!!": GO SUB 9999: GO TO
9e+3
3435 LET win=0: GO SUB 5500: CLS : PRINT "There
were heavycasualties on  both sides. The opposi
ng forcesmanaged to beat off your attack though.
": FOR a=20 TO -20 STEP -2: BEEP .1,a-5: BEEP .1
,a: BEEP .1,a+9: NXT a
3440 LET num=INT (RND*9)+1: FOR a=1 TO num: LET
pla=INT (RND*9)+1: LET s(pla,1)=s(pla,1)*(RND*.5
+.5): LET s(pla,5)=s(pla,5)*RND*.5: LET s(pla,8)
=s(pla,8)*1+(RND*s(pla,8)): NEXT a
3445 LET attack=1
3450 GO SUB 9999: RETURN
3500 REM **- DIPLOMACY -**
3502 CLS
3505 PRINT TAB 12;"Diplomacy"'TAB 12;"---------"
3510 PRINT : PRINT "1. Try to force your oppoent
tosurrender.": PRINT : PRINT "2. Try to form an
alliance.": PRINT
3512 PRINT "3. Return to main menu.": PRINT
3515 INPUT "Enter choice:-";dipsel: LET dipsel=I
NT (dipsel+.5): IF dipsel<1 OR dipsel>3 THEN BE
EP .3,-40: BEEP .3,-35: GO TO 3515
3517 IF dipsel=3 THEN LET menusel=1: RETURN
3520 GO SUB (dipsel-1)*200+3600: GO SUB 9999: RE
TURN
3600 REM **- FORCE OPPONENT TO SURRENDER -**
3605 PRINT "Your diplomacy groups fee for   this
is ";: LET fee=INT (RND*10000)+1: PRINT fee;" T"
: LET p(user,5)=p(user,5)-fee
3610 PRINT " Player ";3-user;":-"
3615 IF user=1 THEN PRINT u$;" ";o$
3617 IF user=2 THEN PRINT t$;" ";n$
3620 DIM e$(1): PRINT "Ruler of ";: GO SUB 1450:
PRINT 9-numpla;" planets. Your opponent is won
dering wether you wish to surrender or not.": IN
PUT "Do you wish to?"; LINE e$: IF e$(1)="y" OR
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e$(1)="Y" THEN  GO TO 9000
3625 PRINT "Player ";3-user;" does not wish to s
urrender.": RETURN
3800 REM **- FORM AN ALLIANCE -**
3805 PRINT "The diplomacy groups fee for doi-ng
this job is ";: LET fee=INT (RND*1e+5)+1: PRINT
fee;CHR$ 144: LET p(user,5)=p(user,5)-fee
3810 PRINT " Playr ";3-user;":-"
3815 IF user=1 THEN PRINT u$;" ";o$
3817 IF user=2 THEN PRINT t$;" ";n$
3820 DIM e$(1): PRINT "Ruler of ";: GO SUB 1450:
PRINT 9-numpla;" planets."'"Your opponent wishe
s to form an alliance.": INPUT "Do you
agree?"; LINE e$: IF e$(1)="y" OR e$(1)="Y" THEN
GO SUB 9000
3825 PRINT "Player ";3-user;" does not wish to f
orm an alliance."
3830 RETURN
4000 REM **- READ OUT -**
4002 CLS
4004 PRINT "Read Out on General Information."':
FOR a=1 TO 32: PRINT CHR$ 164;: NEXT a
4005 PRINT '" Player ";user
4010 IF user=1 THEN PRINT t$;" ";n$
4015 IF user=2 THEN PRINT u$;" ";o$
4020 PRINT " Ruler of ";: GO SUB 1450: PRINT num
pla;" planets."
4025 PRINT "TAX on population=";p(user,4)*100;"%
"
4030 PRINT "PEOPLE under your rule=";
4031 GO SUB 4950
4033 PRINT pop
4034 PRINT "Ships in Navy:";INT (p(user,1)*p(use
r,2)*p(user,3))
4035 PRINT "F.143 in stock=";p(user,1);" ts."
4040 PRINT "F.143 used=";p(user,2)*100;"%"
4045 PRINT "F.143 used in navy=";p(user,3)*p(use
r,2)*100;"%"
4050 PRINT "Percent of total F.143 used for civi
lian needs=";(1-p(user,3))*(user,2)*100;"%"
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4055 PRINT "MONEY owned=";p(user,5);CHR$ 144
4060 PRINT "Planets owned:-"
4065 FOR a=1 TO 9
4070 IF s(a,6)=user THEN  PRINT "Sol ";a,
4080 NEXT a
4090 GO SUB 9999
4100 RETURN
4500 REM **- SURRENDER -**
4505 DIM e$(1): INPUT "Are you sure you wish to
surren-der?"; LINE e$: IF e$(1)<>"y" AND e$(1)<>
"Y" THEN  LET menusel=1: RETURN
4510 CLS : PRINT " Player ";3-user'
4520 IF user=1 THEN  PRINT u$;" ";o$
4525 IF user=2 THEN  PRINT t$;" ";n$
4530 PRINT " Your opponent has decided to  peac
efully surrender all his   weapons to you.": GO
 SUB 9999: GO TO 9000
4950 REM **- WORK OUT TOTAL AMOUNT OF PEOPLE -**
4951 LET pop=0: FOR a=1 TO 9: IF s(a,6)=user THE
N  LET pop=pop+s(a,1)
4952 NEXT a: RETURN
5000 REM **- ALTER TAXES -**
5002 CLS
5003 PRINT TAB 14;"Taxes"'TAB 14;"====="
5005 PRINT " The general tax on the populat-ion
is at the moment ";p(user,4)*100;"%"
5010 INPUT "Enter new value of tax:-";tax: LET p
(user,4)=tax/100
5015 PRINT "New value of tax is ";tax;"%"
5020 GO SUB 9999: RETURN
5500 REM **- Space Battles -**
5501 BORDER 1: PAPER 1: INK 7: CLS
5502 FOR a=1 TO RND*40: PLOT RND*255,RND*175: NE
XT a
5505 LET curve=RND*PI/2: LET start=INT (RND*50)+
200: FOR a=start TO 255 STEP 2: PLOT a,175: DRAW
 255-a,-255+a,curve: NEXT a
5506 PRINT AT 10,0; INK 5;CHR$ 152; INK 6;CHR$ 1
53' INK 3;CHR$ 154; INK 6;CHR$ 155; INK 7;CHR$ 1
56' INK 5;CHR$ 157; INK 6;CHR$ 158: PRINT AT 10,
29; INK 6;" ";CHR$ 145; INK 2;CHR$ 146;AT 11,29;
 INK 6;" ";CHR$ 147;CHR$ 148;AT 12,29;CHR$ 149;C
HR$ 150; INK 5;CHR$ 151: IF fnum>12.5 THEN  LET
fnum=12.5
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5507 LET xwings=INT (fnum+.5)*7+1: DIM x(xwings,
2): FOR a=1 TO xwings: LET x(a,1)=INT (RND*22):
LET x(a,2)=INT (RND*4)+4: PRINT AT x(a,1),x(a,2)
;CHR$ 159: NEXT a
5508 DIM v(7,2): FOR a=1 TO 7: LET v(a,1)=INT (R
ND*22): LET v(a,2)=INT (RND*4)+24: PRINT AT v(a,
1),v(a,2); INK 6;CHR$ 160: NEXT a
5509 FOR a=1 TO INT (RND*9): LET alp=INT (RND*9)
+1: PRINT AT INT (RND*22),INT (RND*11)+10; INK I
NT (RND*8);CHR$ s(alp,7): NEXT a
5510 FOR g=0 TO RND*100: LET shipick=INT (RND*xw
ings)+1: LET xcord=(x(shipick,2)+1)*8: LET ycord
=(22-x(shipick,1))*8-4: PLOT xcord,ycord: LET le
n=RND*100: DRAW len,0: GO SUB 5900: PLOT  OVER 1
;xcord,ycord: DRAW  OVER 1;len,0
5515 LET shipick=INT (RND*7)+1: LET xcord=v(ship
ick,2)*8-1: LET ycord=(22-v(shipick,1))*8-4: PLO
T xcord,ycord: LET len=-RND*100: DRAW len,0: GO
SUB 5900: PLOT  OVER 1;xcord,ycord: DRAW  OVER 1
;len,0
5525 NEXT g
5530 GO SUB win*1000+6000: RETURN
5900 REM **- FIRE SOUND -**
5901 BEEP .05,RND*20+20: BEEP .05,RND*20+25: RET
URN
6000 REM **- DEFENDER WINS -**
6005 PLOT 231,84: GO SUB 5900: DRAW -231,0: OVER
 1: PLOT 231,84: DRAW -231,0: OVER 0: GO SUB 790
0: RETURN
6999 STOP
7000 REM **- Attacker wins -**
7005 PLOT 24,84: GO SUB 5900: DRAW 231,0: OVER 1
: PLOT 24,84: DRAW 231,0: OVER 0: GO SUB 7900: R
ETURN
7900 REM **- SHIP BLOW UP -**
7901 FOR c=1 TO RND*15: FOR b=10 TO 12: PRINT AT
 b,win*29; PAPER INT (RND*8);"   ";: NEXT b: BEE
P RND*.05,RND*-20-20: NEXT c: RETURN
8499 RETURN
8500 REM **- TITLE -**
8502 GO SUB 8600
8505 PAPER 1: BORDER 1: INK 7: BRIGHT 1: CLS
8510 CIRCLE 127,88,50: PLOT 127,38: DRAW 0,100,1
: PLOT 77,88: DRAW 100,0,1
8515 PRINT TAB 7; FLASH 1;"SPACE BATTLE 2091"
8520 CIRCLE 50,150,20: PLOT 50,130: DRAW 0,40,1:
 PLOT 30,150: DRAW 40,0,1
8525 PRINT AT 10,0; INK 5;CHR$ 152; INK 6;CHR$ 1
53' INK 3;CHR$ 154; INK 6;CHR$ 155; INK 7;CHR$ 1
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56' INK 5;CHR$ 157; INK 6;CHR$ 158
8530 FOR a=1 TO RND*10: PRINT AT RND*21,RND*31;
OVER 1;CHR$ 159: NEXT a: FOR a=1 TO RND*9: PRINT
 AT RND*21,RND*31; INK 6; OVER 1;CHR$ 160: NEXT
a
8540 RETURN
8600 REM **- Set-up graphics -**
8605 FOR a=USR "a" TO USR "u"+7: READ v: POKE a,
v: NEXT a
8610 RETURN
9000 REM **- UNIFIED SYSTEM -**
90?                  INK 7: BRIGHT 0: CLS
9?10 INK 6: BRIGHT 1: PLOT 0,83: DRAW 0,10: REM
Sol
9015 PLOT 3,88: PLOT 5,88: PLOT 7,88: INK 2: PLO
T 10,88: REM Inner Planets
9020 INK 6: PLOT 33,88: DRAW 1,1: DRAW 1,-1: DRA
W -1,-1: DRAW -1,1: REM Sol 5
9025 INK 7: PLOT 62,88: PLOT 63,88: REM Sol 6
9030 INK 4: PLOT 124,88: INK 3: PLOT 194,88: INK
 0: PLOT 255,88: REM Outermost Planets
9035 INK 6: PRINT AT 1,15;CHR$ 132;CHR$ 143;CHR$
 143;CHR$ 136;AT 2,15;CHR$ 143;CHR$ 143;CHR$ 143
;CHR$ 143;AT 3,15;CHR$ 143;CHR$ 143;CHR$ 143;CHR
$ 143;AT 4,15;CHR$ 129;CHR$ 143;CHR$ 143;CHR$ 13
0
9040 INK 7: PAPER 0: PRINT AT 1,0;"The Sun the o
n ";AT 2,0;"same scale --->";AT 3,0;"as the plan
ets."
9045 PRINT AT 0,7; BRIGHT 1: INVERSE 1;"Plan of
Sol System"
9050 PAPER 4: INK 0: BRIGHT 1: PRINT AT 13,1;"Yo
u have succesfully unified";AT 14,2;"the Sol sus
tem. Human civ-";AT 15,3;"ilisation can now prog
r-";AT 16,4;"ess and spread into t-";AT 17,4;"he
 Galaxy. Well done";AT 18,5;"!!!!!!!!!!!!!!!!!!!!"
9055 LET oct=0
9060 BEEP .1,-14+oct: PAUSE 20: BEEP .1,-14+oct:
 PAUSE 20: BEEP .1,-14+oct: PAUSE 20: BEEP .125,
-18+oct: PAUSE 4: BEEP .1,-11+oct: PAUSE 10: BEE
P .1,-14+oct: PAUSE 20: BEEP .125,-18+oct: PAUSE
 4: BEEP .1,-11+oct: PAUSE 10: BEEP .1,-14+oct:
PAUSE 50
9065 LET oct=INT (RND*21)-10: GO TO 9060
9990 CLS : PRINT TAB 12;"Save Game."'TAB 12;"---
-------"
9991 PRINT '''"File name:-";: LET f$="Turn "+STR
$ turn: PRINT f$: SAVE t$ LINE 9993: PRINT "Prog
ram saved, rewind tape for  verification. If it
does not    verify then type GO TO 9991.": BEEP
.5,-25: VERIFY ""
9992 PRINT "Program Verified. Do you wish tocont
inue this game?": INPUT "(Y=yes/N=no)"; LINE r$:
 IF r$(1)="n" OR r$(1)="N" THEN  RANDOMIZE USR 0
9993 LET menusel=1: RETURN
9998 REM **- ENTER prompt -**
9999 INPUT  FLASH 1;"Press ENTER to continue.";
LINE e$: BEEP .05,RND*10: BEEP .05,RND*10: RETUR
N
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